

Vertical School of Art

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THESIS SUBMITTED TO THE FACULTY OF VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
IN PARTIAL FULFILLMENT OF THE DEGREE OF MASTER OF ARCHITECTURE IN ARCHITECTURE

Key words: skyscraper, school of art, cubism, picasso, sculpture, painting, photography, architecture.

SEPTEMBER 28TH, 2011
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Vertical Buildings (skyscrapers) challenge our perception of space, our perception of scale, our idea of movement, they challenge the way we live. Currently urban cities are becoming more and more dense. Lack of space is a big issue and now buildings are being torn down and are replaced by skyscrapers. And these new skyscrapers are being redefined to house a living and working environment.

Cubism challenges our perception of depth, our tactile sense, our ideas of proportion. Cubism, as a 20th century movement, was in continuous exploration of the senses. Cubists challenged the conception of art, and consequently shaped and influenced many social movements of their time.

Like any human expression, art and architecture are in a continuous evolution. Both share the pursuit of perfection, the exploration of spatial, sensorial, and emotional feelings. Both are a part of us.

With all of these ideas in mind, I started to investigate and explore the idea of a skyscraper that would house an art school. Where the building and its inhabitants will contribute to its surroundings of the school.

There is the challenge of programming the art school into a vertical configuration and at the same time, this challenge offers the possibility of discovery for new organization of the school as a vertical world.

a b s t r a c t

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“Art is the elimination of the unnecessary”

...Pablo Picasso

The majority of skyscrapers are located in great urban cities, where there is not much space for the city to grow horizontal. Skyscrapers small foot print and high occupancy capabilities proved to be a solution for the need of space within a dense city.



Figure 01- Site Plan

After talking to my committee, the city of Baltimore became the correct choice. Baltimore's harbor is one of the city's main attractions because of its commercial life. In the past Baltimore was one of the main ports of the East Coast of the United States and for a period of time, was the capital of the USA. In the last few years, there has been a decrease on the amount of people leaving Baltimore. Even though the city has a lot of improvements around its harbor, there is still a lack of connection between it and the city.

site-location



1,2,and site



Figure 03- Existing Parking Lot

3,4



Figure 04 - East View

4



Figure 05 - Old Brick Building

The site currently exists as a parking lot four blocks north of the harbor. North to the site we find the City Hall and Postal Office. On the east side, across Guilford Ave, there is a parking garage. Many little stores are located south of the site on Baltimore Street. The site shares a city block with two other buildings, an old brick commercial building and a twenty two stories apartment tower. Since the Harbor is located four blocks south of the site, there is a large pedestrian and vehicular traffic going South to North. However, in the future there is going to be another large pedestrian circulation which will come west to east because of the new Baltimore metro station.

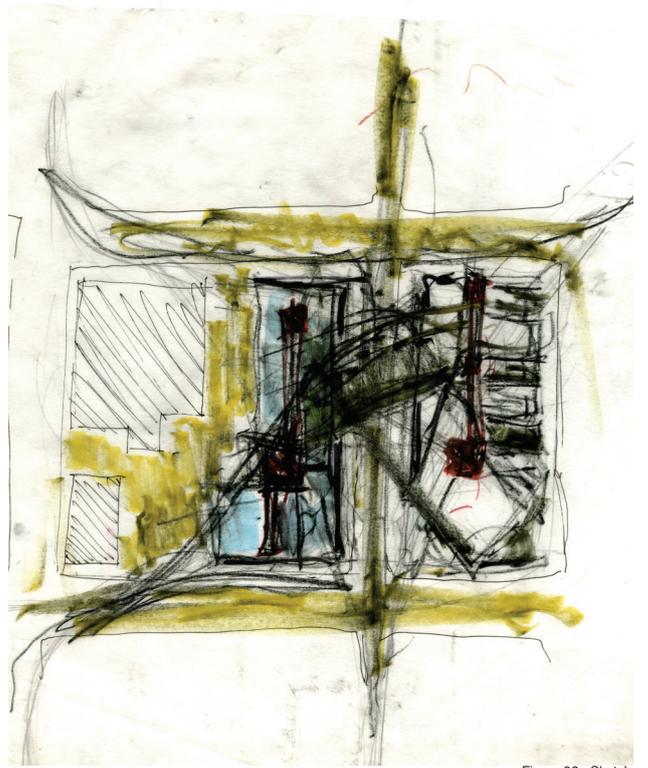


Figure 06 - Sketch

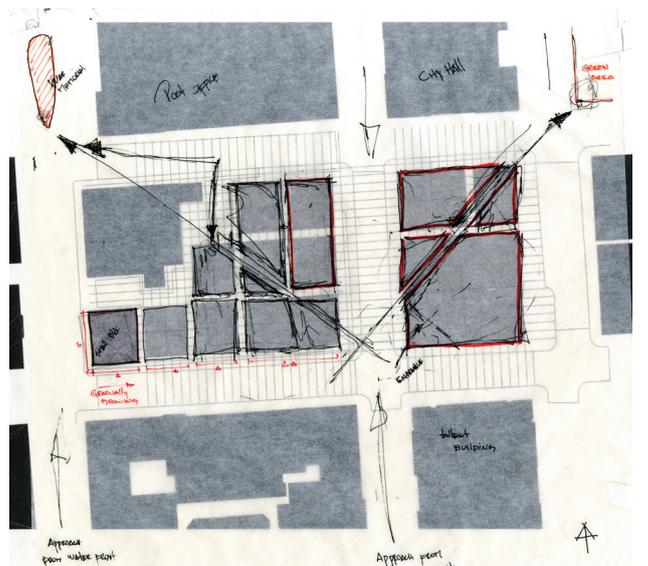


Figure 07 - Sketch

site - movement

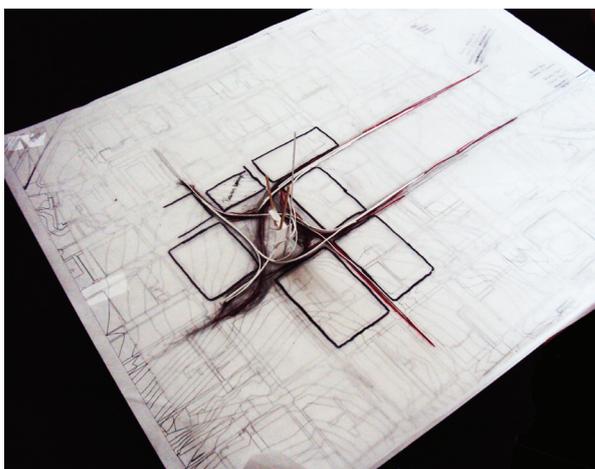


Figure 08 - Circulation Model

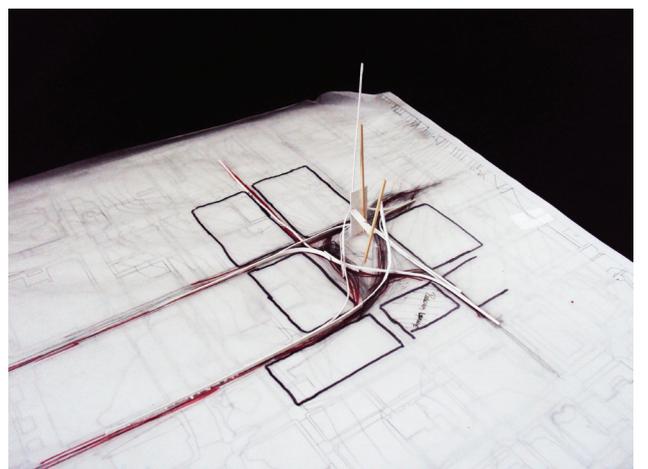
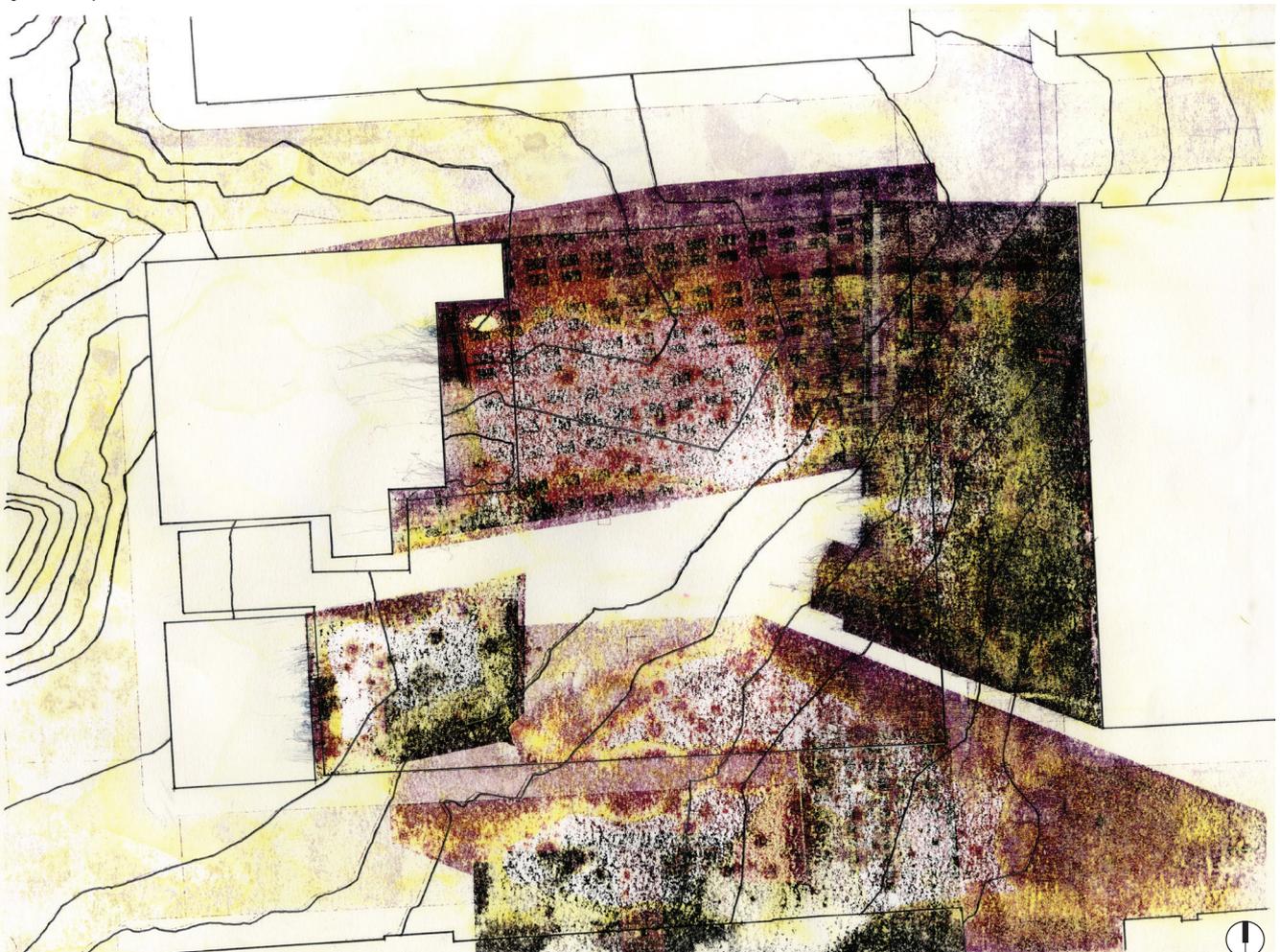


Figure 09 - Circulation Model

The following is a study of the shadows that are cast on my site from the surrounding buildings at the winter and summer solstice. The exercise was also an exploration of time, how it affects architecture. To understand the process of time I decided to use a collage technique to represent the passing of time in the drawing.

site-shadows

Figure 10 - Study of Shadows



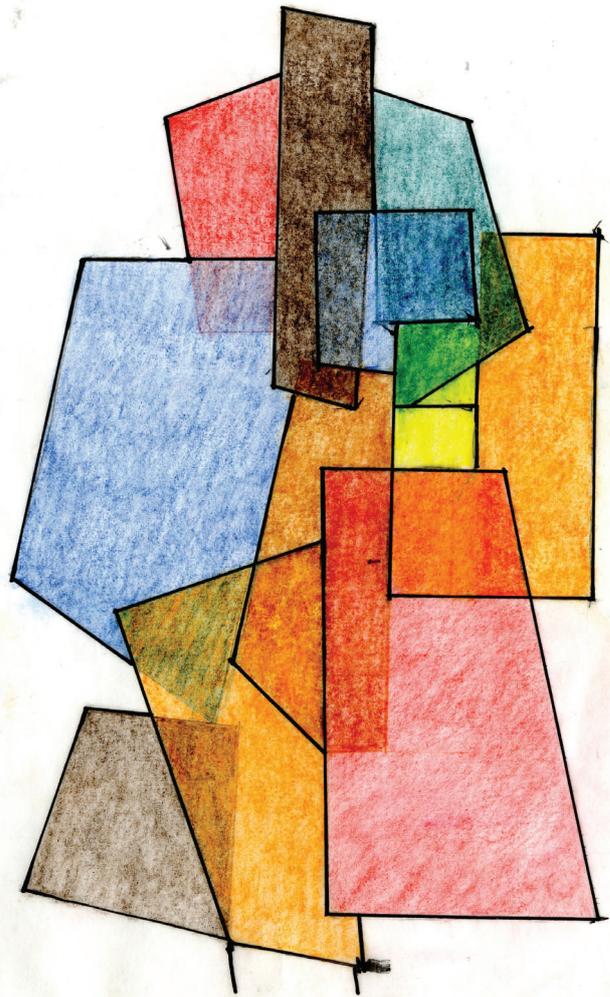


Figure 11 - The Violin and the Grapes Study

While working on my research, the site, and the program, I approached a larger exploration: art itself. After looking at the history of art through time, I was inspired and intrigued by cubism. This was due to its similarities with the way I see architecture. In cubism I was able to see pieces and parts and different colors of the same element that had a coherent and beautiful meaning when they were together as a painting. Cubism has a sense of unlimited discovery. A natural shape or a man-made object can be expressed as an explosion of layers, geometries and perspectives. The search for geometry and volume brought Picasso and Georges Braque to develop cubism. The evolution of this movement had two parts, Analytic Cubism and Synthetic Cubism.

c u b i s m

From my investigation of cubism, I choose a Picasso painting called "The violin and the grapes". In the painting, a game in geometry and multiple perspective is discovered. I retraced its geometry, separated its layers and I was able to understand its beauty in more depth.

All the parts that form the painting were not there arbitrarily. They talked to each other, and they are organized around an invisible core. This organizer (the core) seems to hold everything in place and my brain was able to recreate the image and perceive the beauty of time in the painting.

I struggled for a good time finding not the geometry of the building but its connections to the city itself.

My idea of a vertical school of art was coming along. I had the desire to contribute to the city of Baltimore. Then, my passion for art and the challenge of a vertical building took me to a journey of discovering new ways to see architecture.

My first decision after talking to my committee was to dedicate the first couple of floors of the building to the pedestrian and to the grid of the city. The next connection was with MICA (Maryland Institute College of Art) to reinforce interaction through the city.

In a series of multiple layers and using my research on movement, location, shadows and art, I created a collage. The collage started to show me the connection and design movements in plan. Now I was ready for the next step.

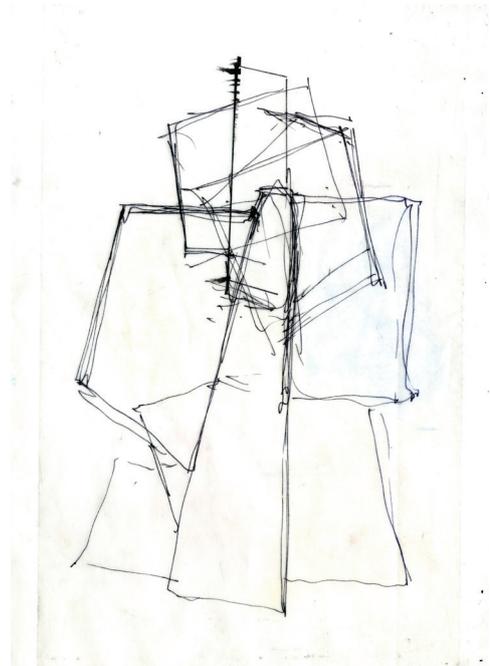


Figure 12 - Abstraction from "The Violin and the Grapes" by Picasso

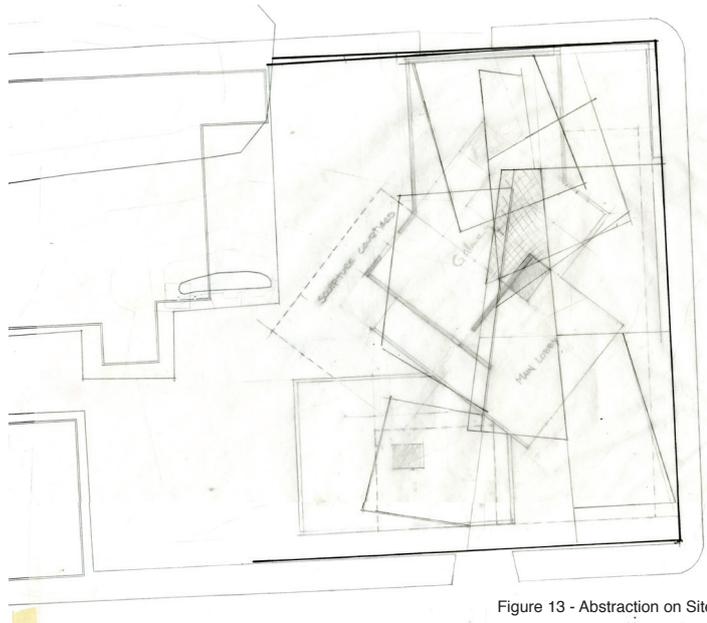


Figure 13 - Abstraction on Site

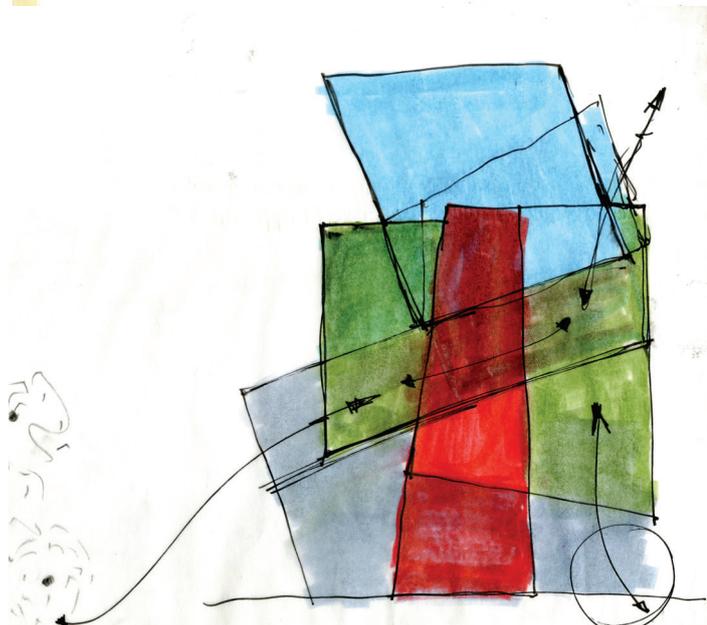


Figure 14 - Site Diagram

After looking at my sketches and drawings of the horizontally proposed connections, it was time for a vertical investigation. Since I was designing a school of arts, I started thinking that there should be big spaces for exhibitions, and that those should be visually connected. This meant that when a person was walking in a corridor in level 15, he or she would be able to look down to level 13. After acknowledging the vertical visual connection I learned that the main core shouldn't be near the center of the building, since the center should be as flexible as possible. Comparing my building to a college campus, I realized the program for the school of art includes some other spaces. I wanted to create public spaces between the schools, that I later called plazas.

vertical cubism

the program begins

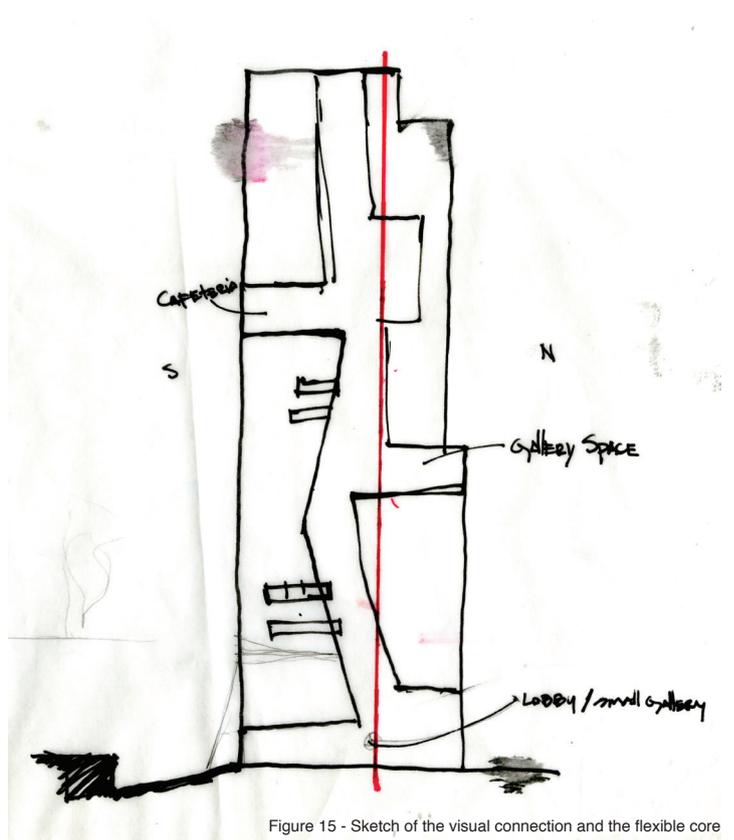


Figure 15 - Sketch of the visual connection and the flexible core

In order to begin the architectural design, I needed to structure the School of Arts.

According to my research and further analysis, the spaces needed to consist of: outdoor and indoor exhibition spaces at the lower levels, with the main instructional elements of the school in the upper levels. The art school consist of tree main schools : Sculpture, Painting and Photography. Each of them had their strict necessities and requirements that inform its location throughout the building.

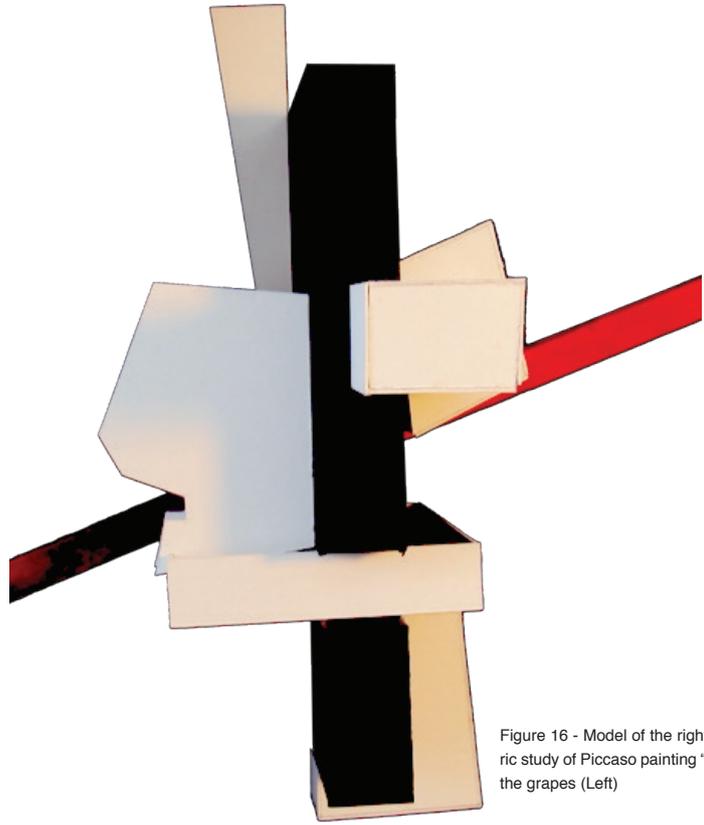


Figure 16 - Model of the right is a volumetric study of Picasso painting "The violin and the grapes (Left)

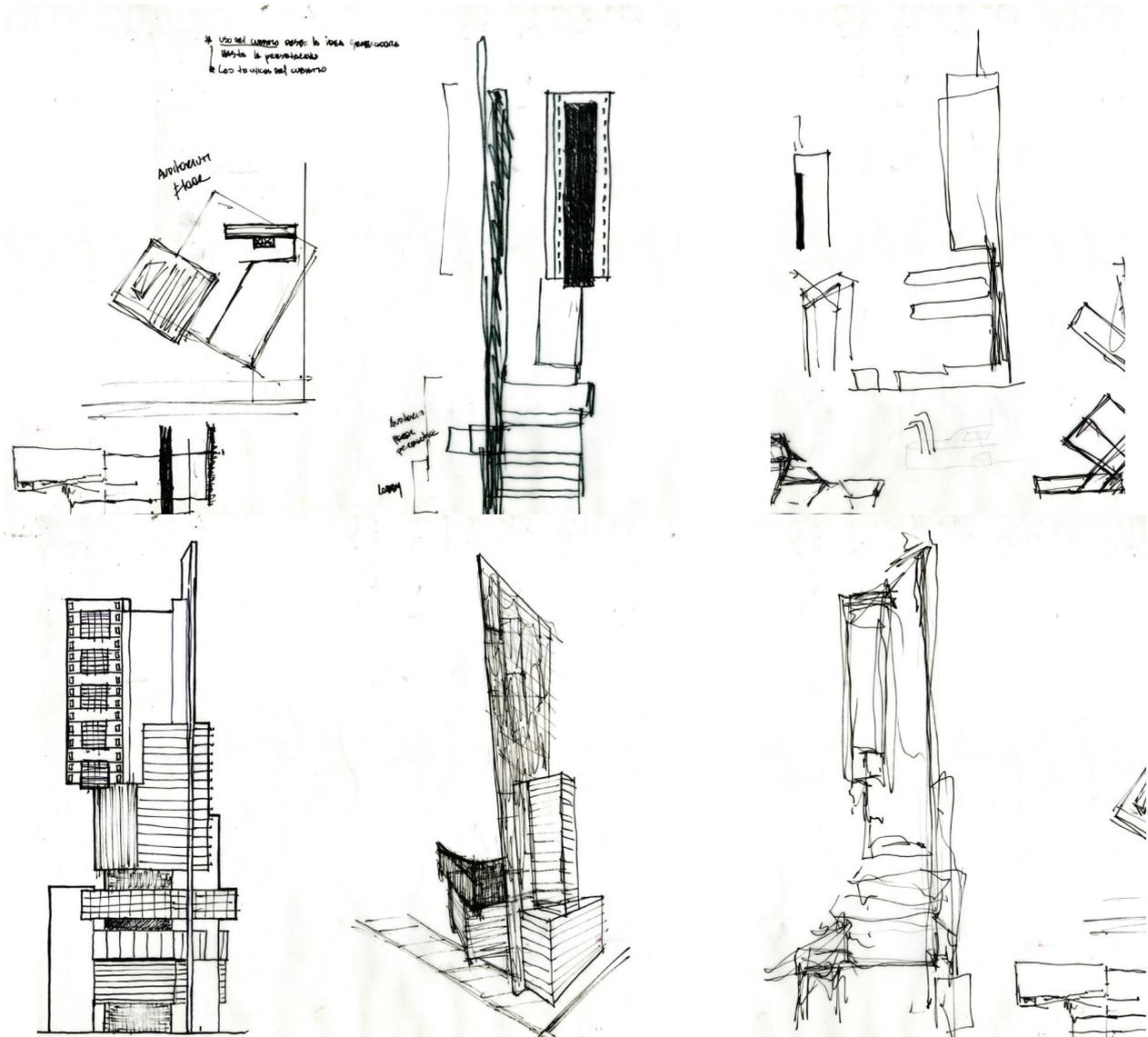


Figure 17 - Facade Studies (Below)

site comparison

In order to analyze what the spatial dimensions for this program would be, I decided to make an experiment. I needed to compare different case studies.

What would a well known and successful art school look like vertically?

I experimented with aligning three school examples on the site.

I placed their plan views as if they were section cuts through the building.

This experiment allowed me to discover two important points:

-The height of the building needs to house the schools.

-The amount of green spaces which I am calling "plazas" needs to link the three schools together into a whole.

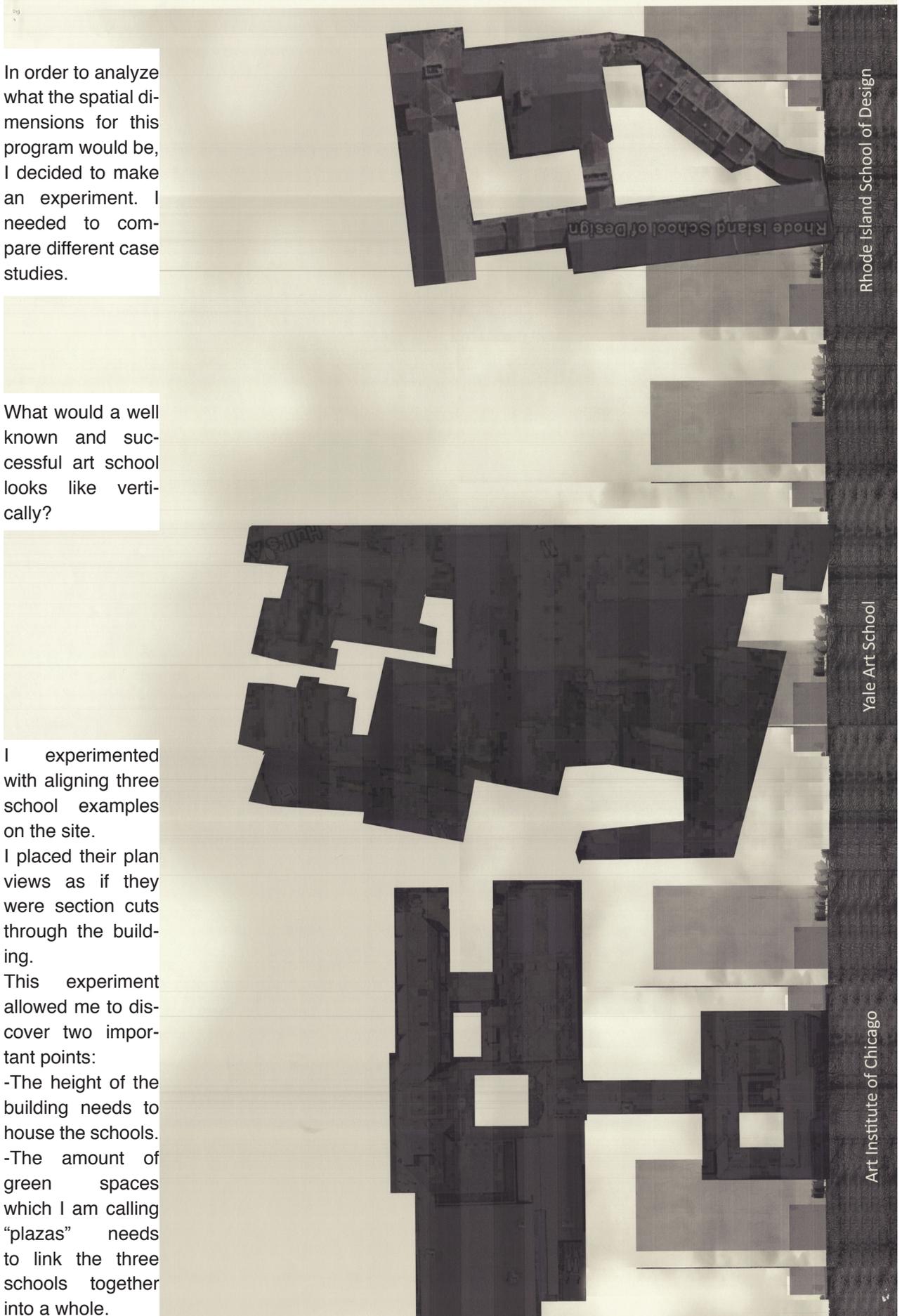


Figure 18 - Site Comparison

i d e a
development

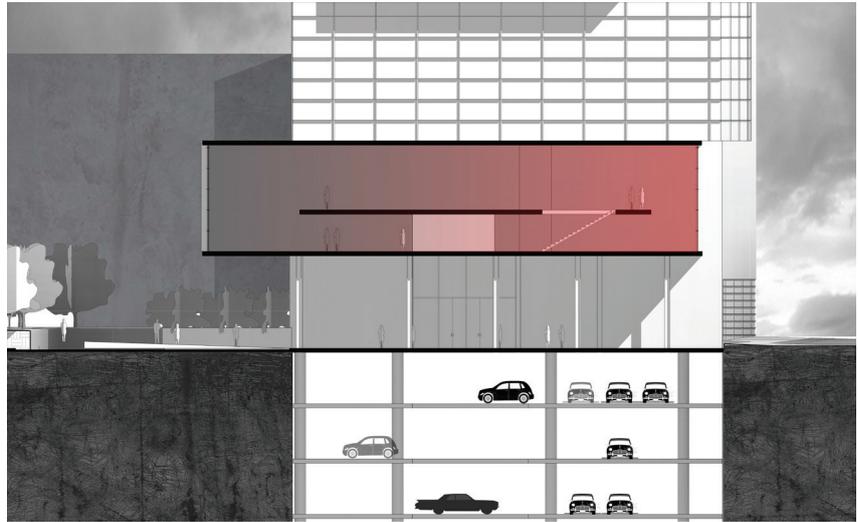


Figure 19 - Court Yard

This model and the following drawings show the development of the ground floor public plaza, the scale of the first levels of the building, and the entrance.

Figure 20 - Study Model

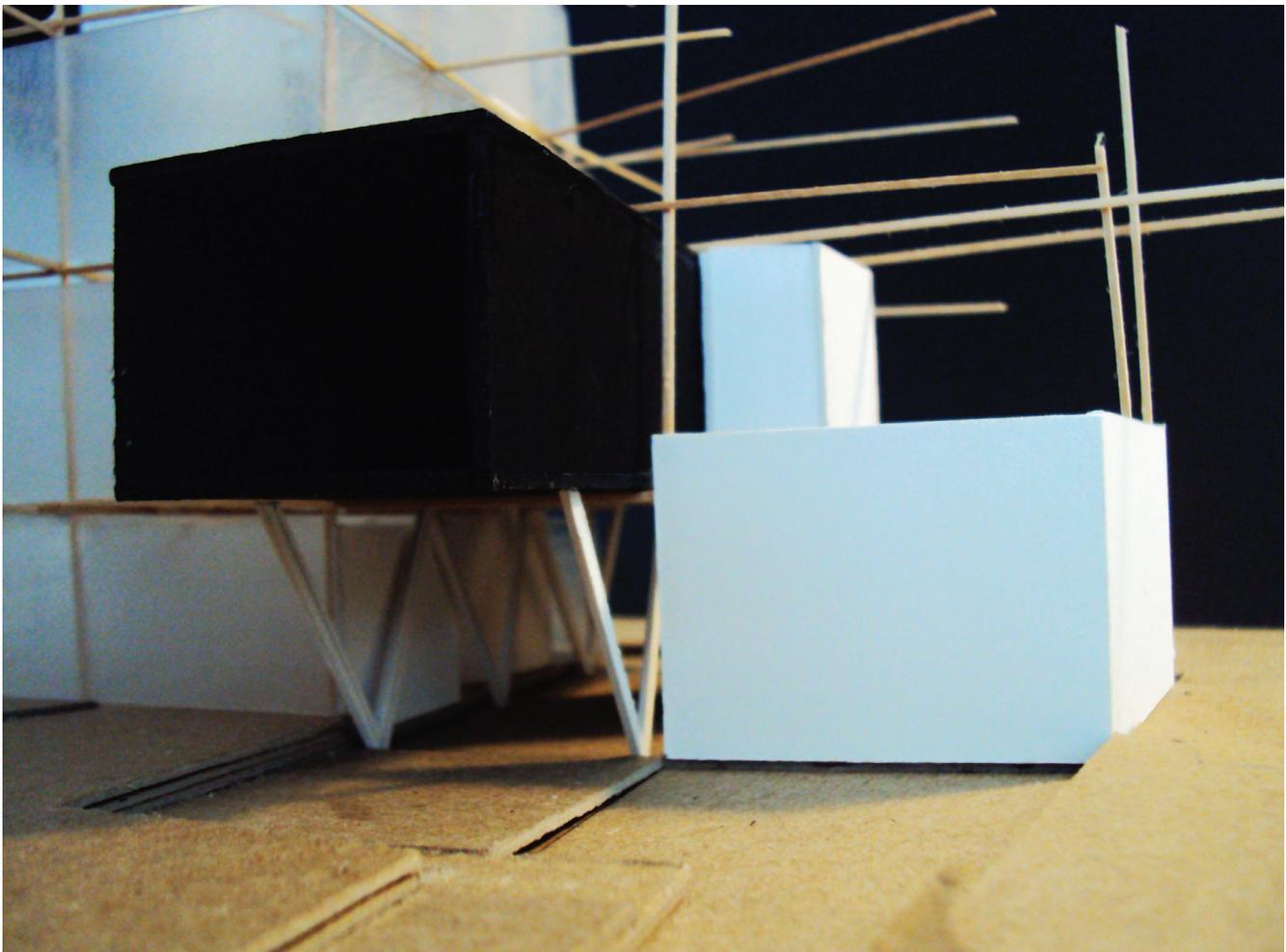
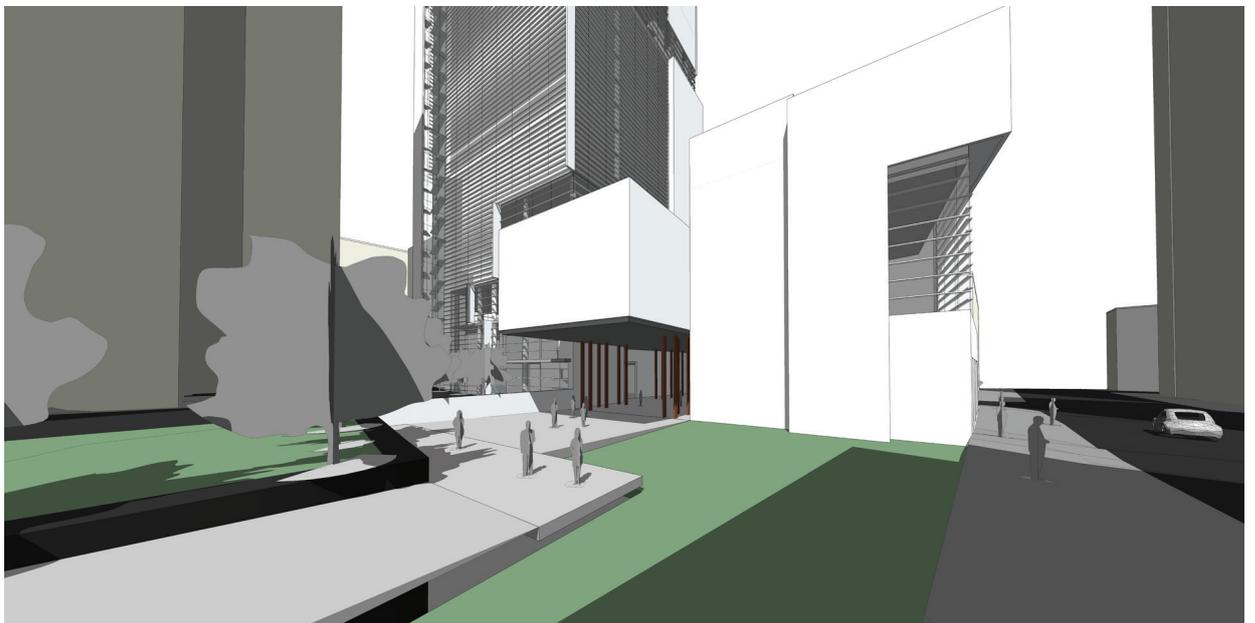
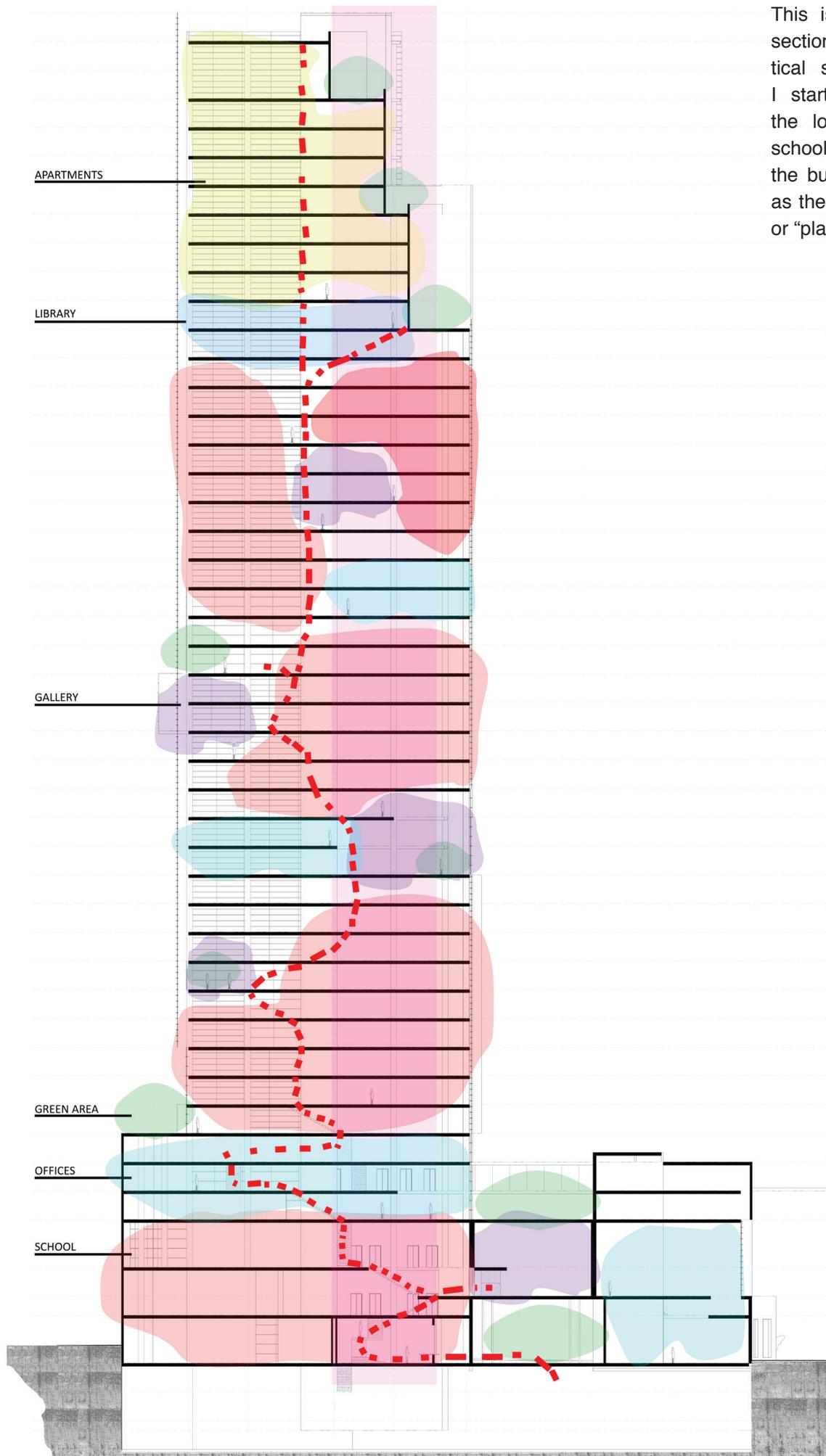




Figure 21 - Plan study for the ground level and plaza. (Above)

Figure 22 - The image at the bottom is a perspective view from the new plaza towards the school entrance. (Below)





This is a proposed section for the vertical school of art. I started to assign the location of the schools throughout the building, as well as the green spaces or "plazas".

Figure 23 - Section Study

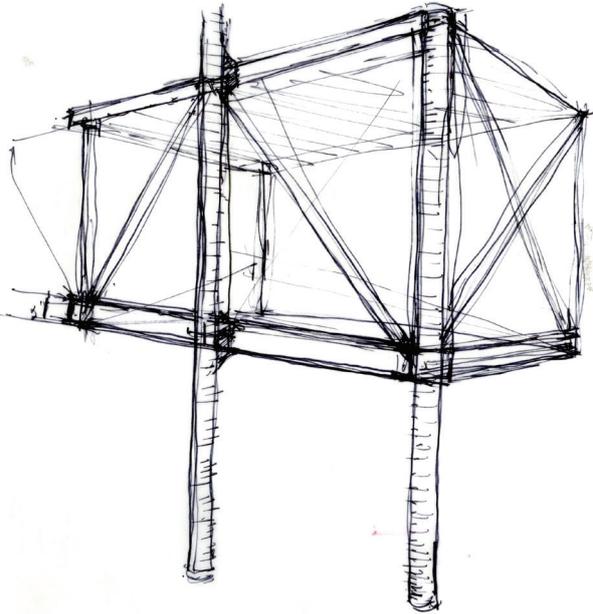


Figure 24 - Study of the Cantilever Structures

The structure of the building plays along with the geometry and architecture gestures. The school is held by a steel frame structure which facilitates the flexibility of the school interior letting the vertical connection to open up more freely. Also the elevators and stairs work as anchors for the building as well as the main supports for the cantilevered volumes.

structure

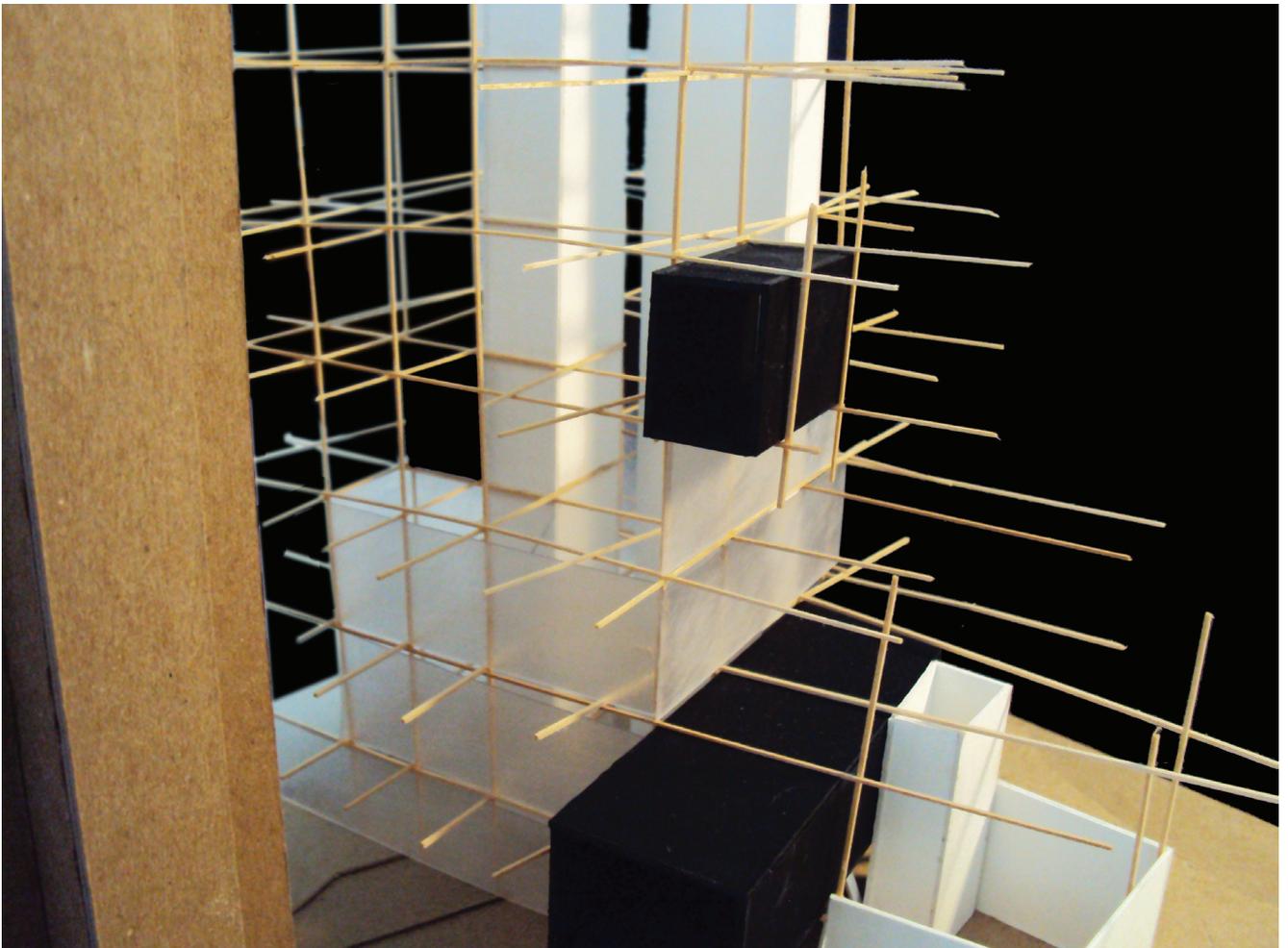


Figure 25 - Study Model

Structural Model, study of the columns grid, as well as vertical circulation.

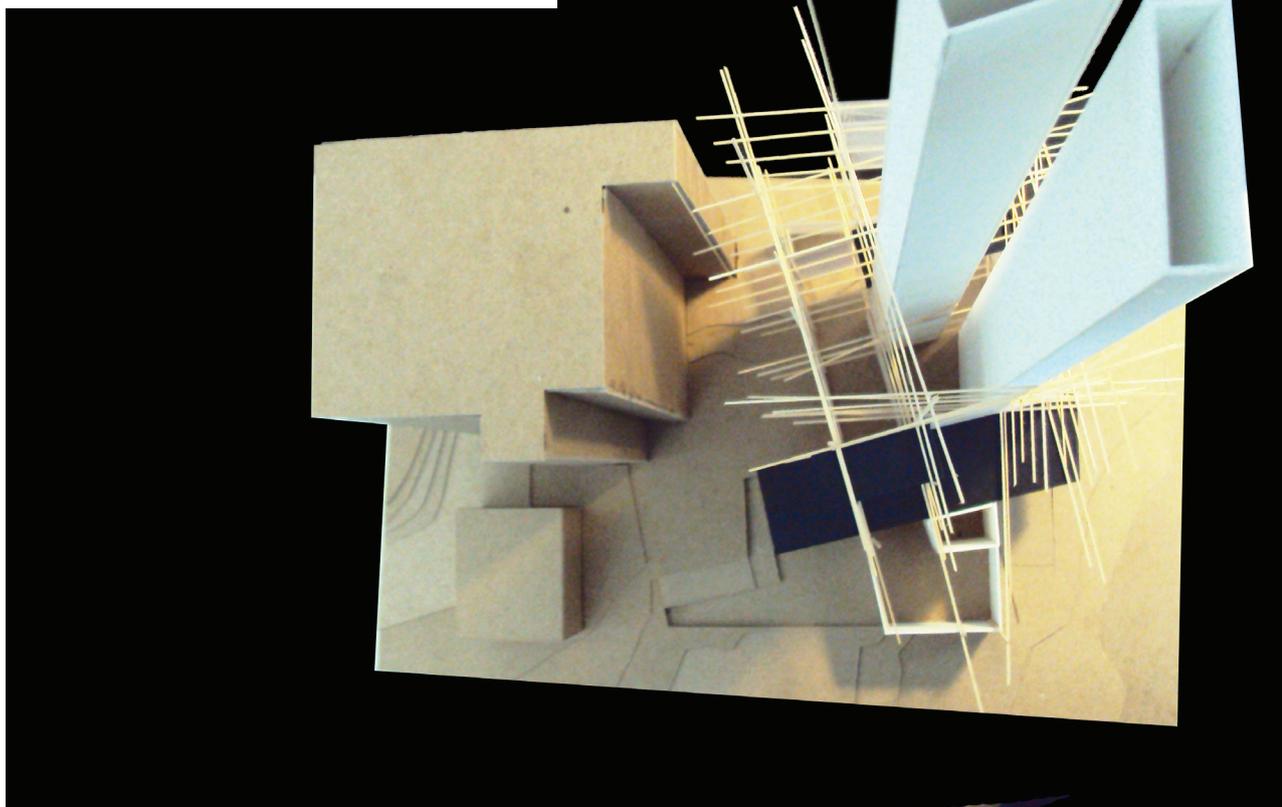
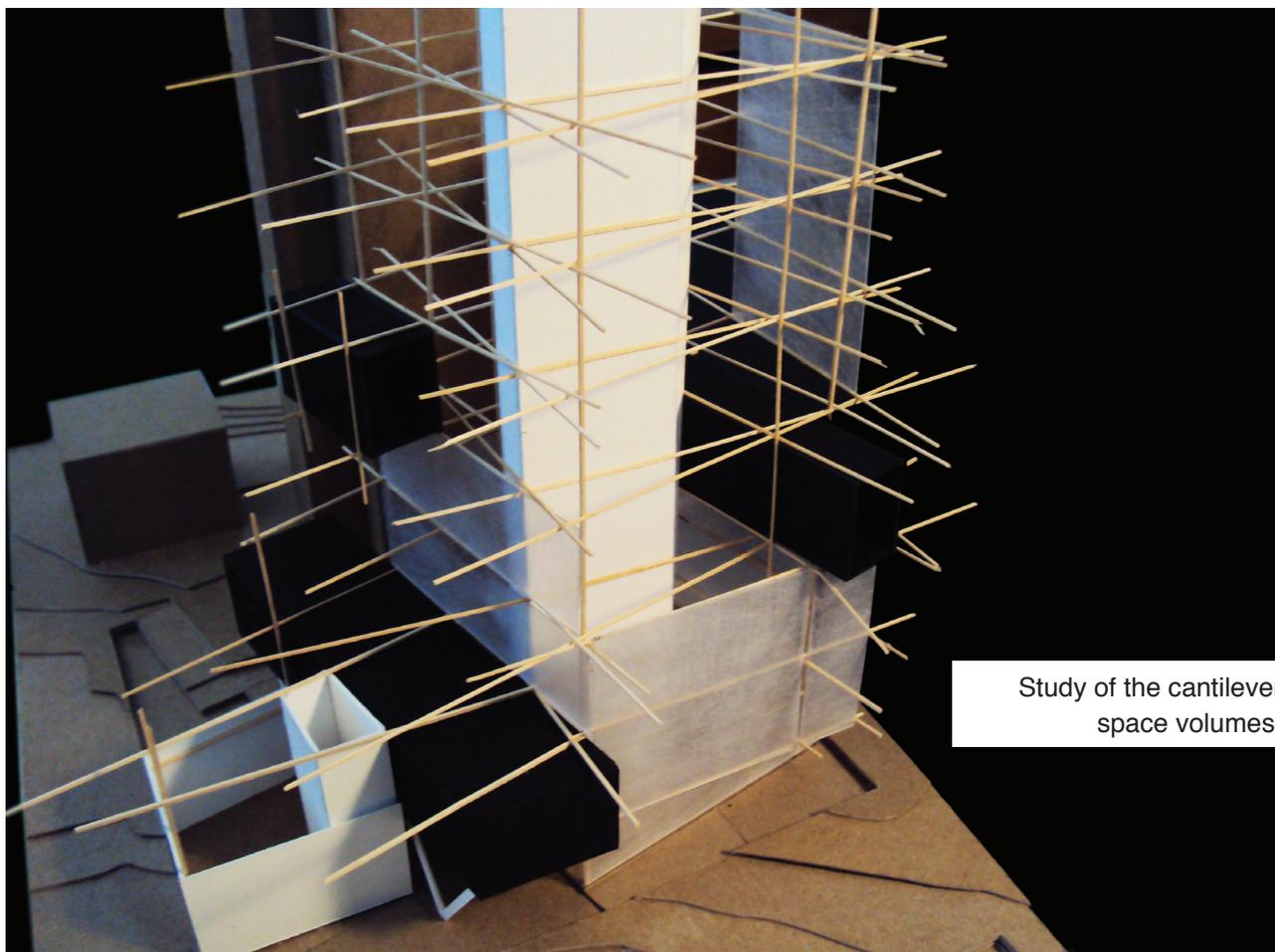


Figure 26 - Study Model



Study of the cantilever space volumes.

Figure 27 - Study Model

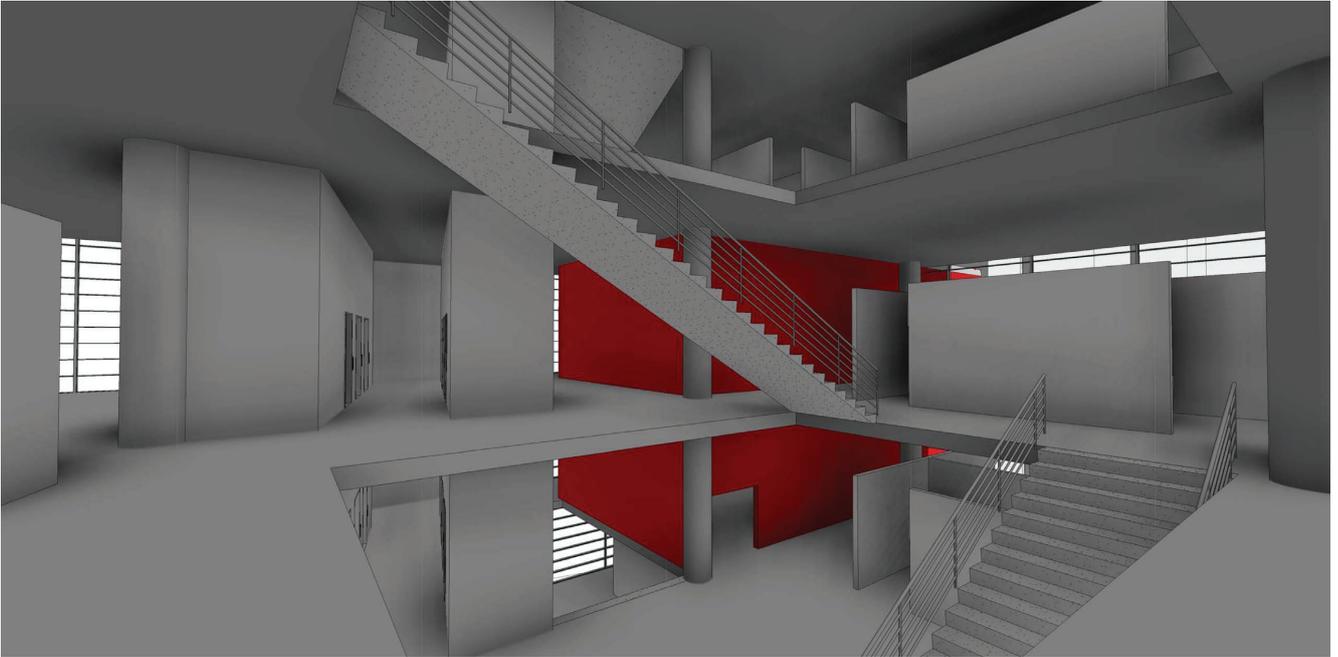


Figure 28 - Interior Space of the School

Because of the interdisciplinary style of work in a School of Art, the space arrangement needs to support the idea. All common areas in the building connect if not spatially, visually, with other disciplines within the school

The main presentation studios for each of the schools are rectangular volumes that cantilever out from the building and are structurally connected to the main cores to provide stability.

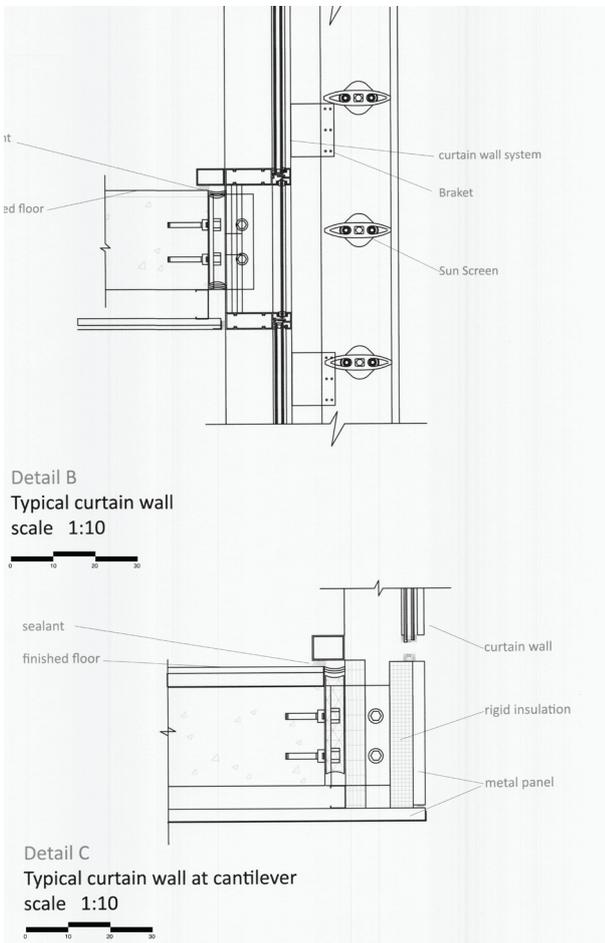


Figure 29 - Curtain Wall Detail

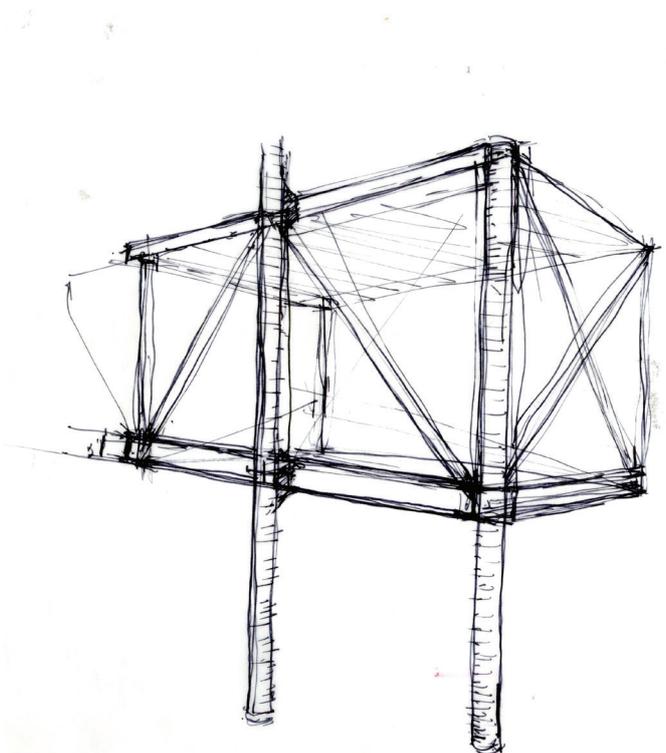
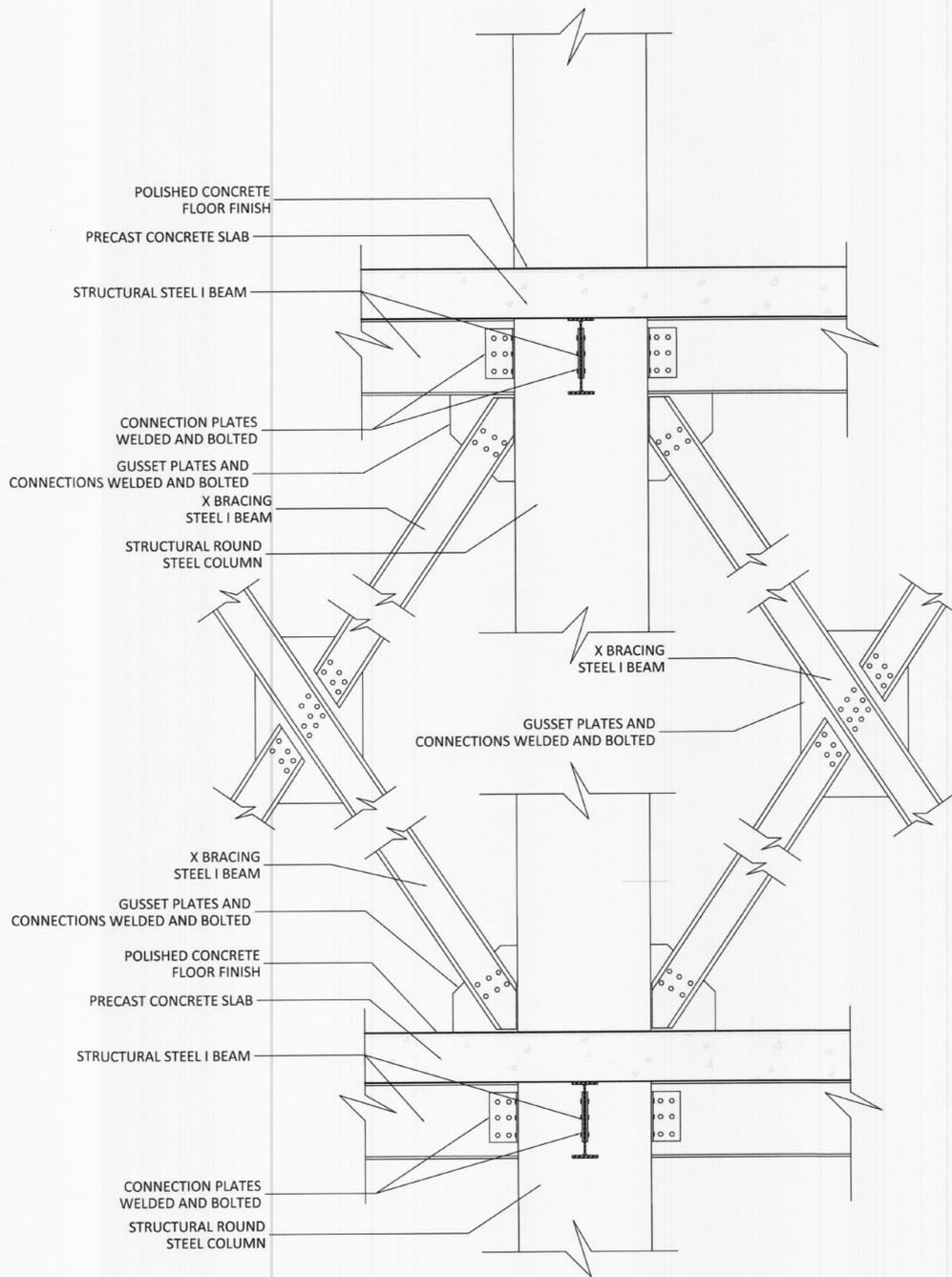


Figure 30 - Study of the Cantilever Structures



Detail A
 "X" bracing
 scale 1:40



Facade studies started as a study of needs for each discipline. The School of Sculpture found its location at the bottom of the building because of its proximity to the courtyard and also because of the big spaces needed for its development. The School of Painting needed more diffuse light, is located above the School of Sculpture with their main studio rooms facing north. Finally the School of Photography sits at the top. It has studio rooms that frame the city as an analogy to a film.

facade studies

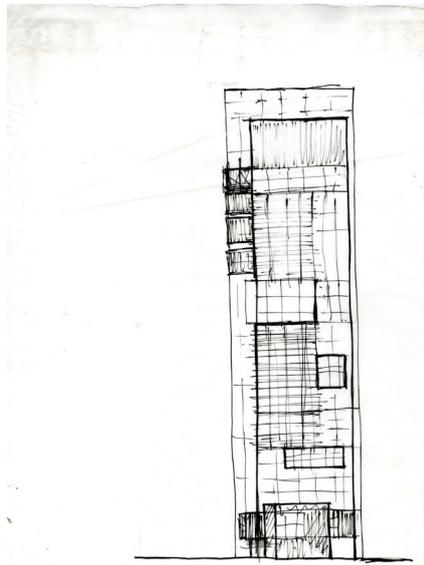


Figure 32 - Elevation Study I

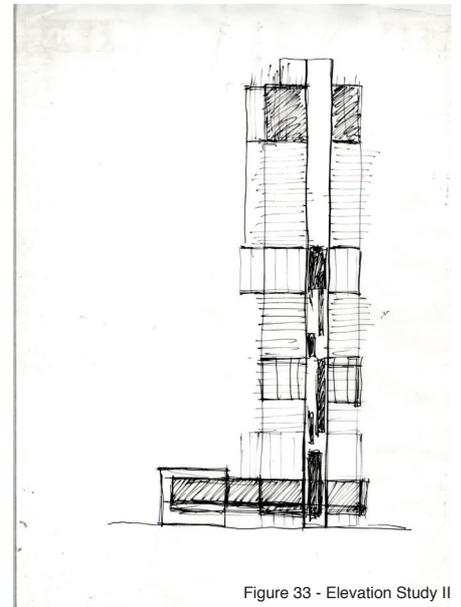


Figure 33 - Elevation Study II

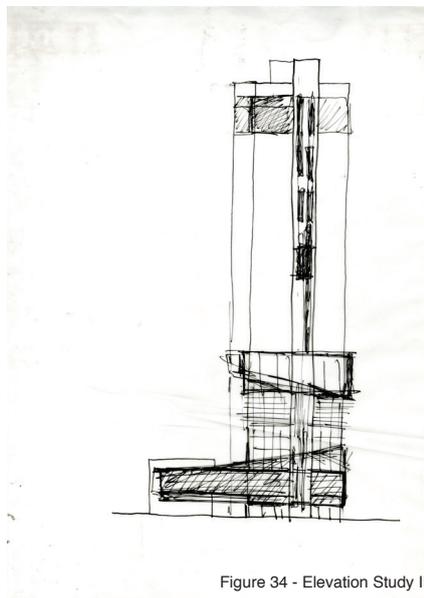


Figure 34 - Elevation Study III

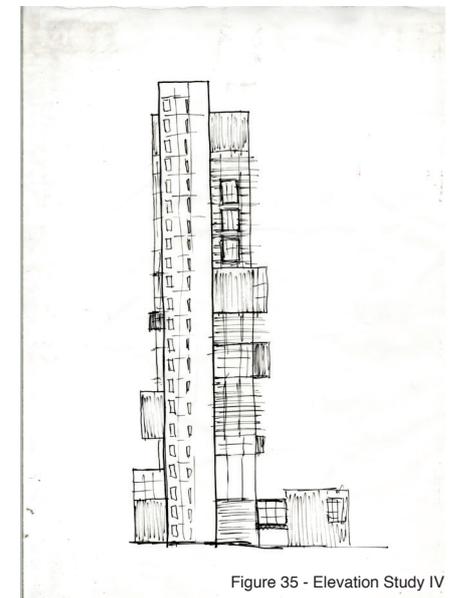


Figure 35 - Elevation Study IV

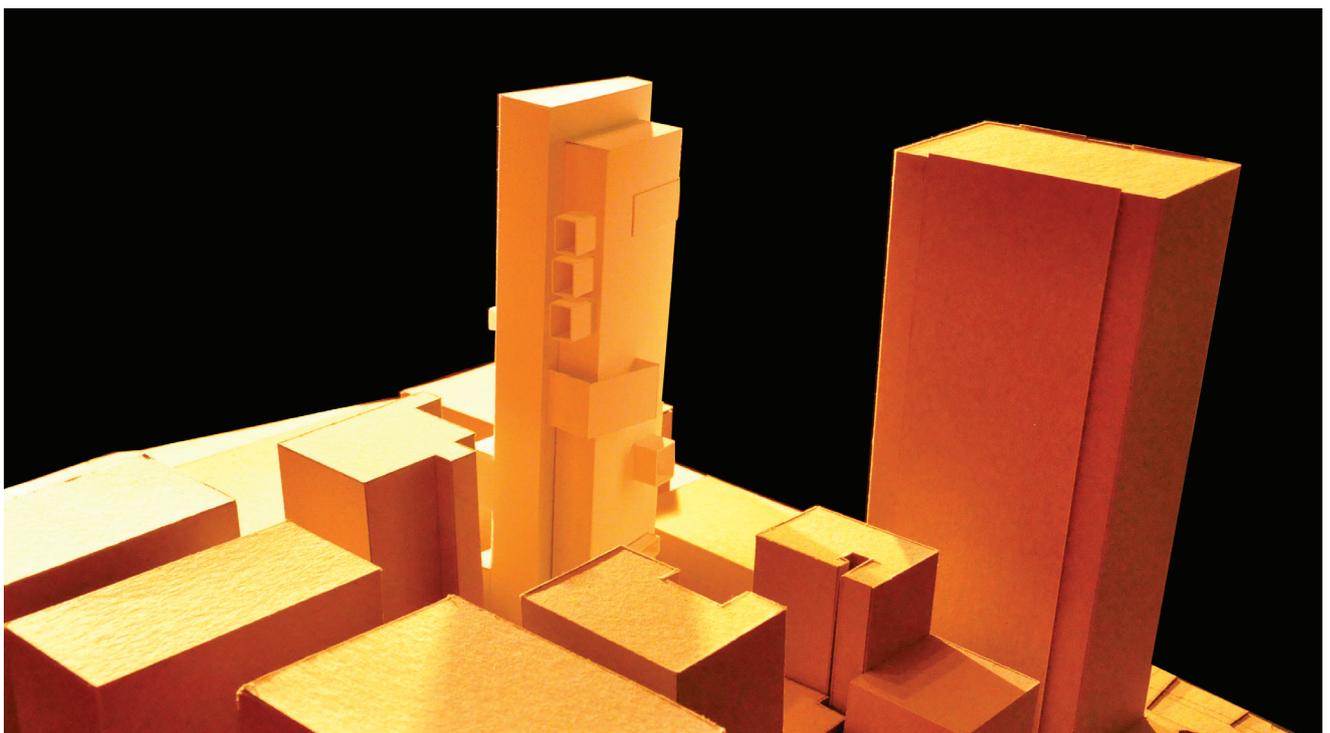


Figure 36 - Study Model Building and Context

Next are the final drawings for my defense, as well as my final model

Vertical School of Art



Figure 37 - Court Yard Entry

Site Analysis

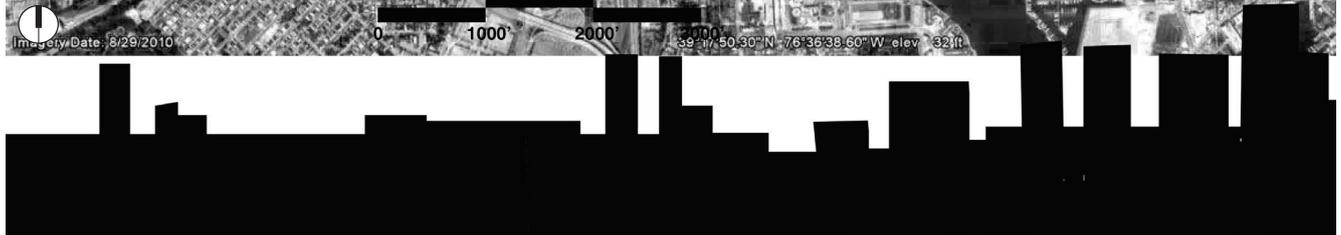


Figure 38 - Site Plan and Images

Context Analysis



Figure 39 - Enlarged Site Plan and Images



Figure 40 -
Ground Floor



Figure 42 -
2nd Floor



Main Gallery
SCALE 1=200 (metric)



Figure 43 -
Main Gallery Floor



Figure 44 -
Section-Galleries



Floor 3
SCALE 1=200 (metric)



Figure 45 -
3rd Floor



Figure 46 -
Typical Sculpture Plan

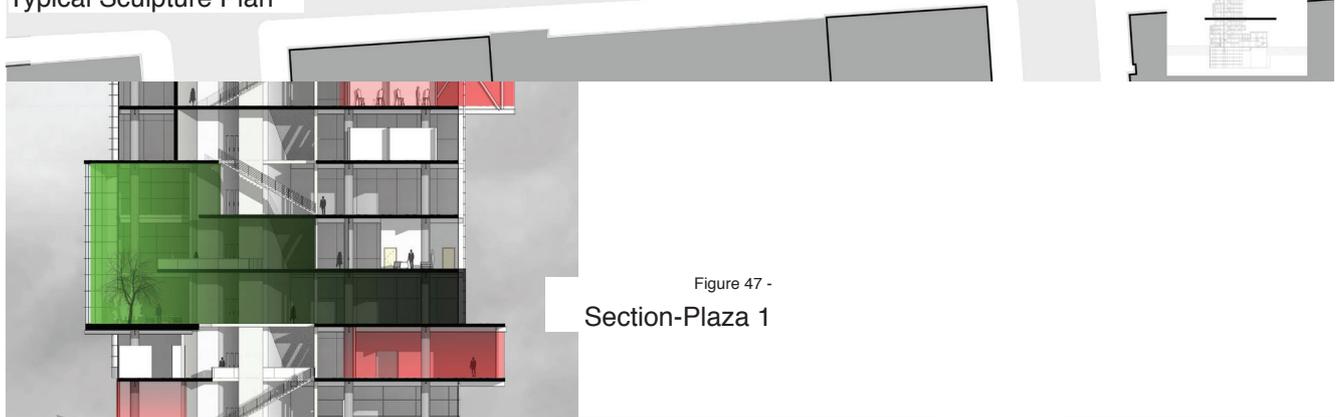


Figure 47 -
Section-Plaza 1



Figure 48 -
Plaza 1



Floor 13 - Typical Painting
SCALE 1=200 (metric)



Figure 49 -
Typical Painting Floor



Figure 50 -
Section-Plaza 2



Floor 16 - Plaza 2
SCALE 1=200 (metric)



Figure 51 -
Plaza 2



Floor 22 - Typical Photography
SCALE 1=200 (metric)



Figure 52 -
Typical Photography Floor

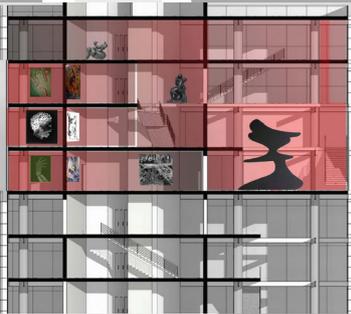
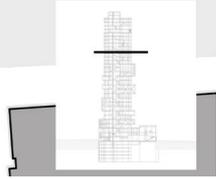


Figure 53 -
Section-Plaza 3



Floor 28 - Gallery
SCALE 1=200 (metric)

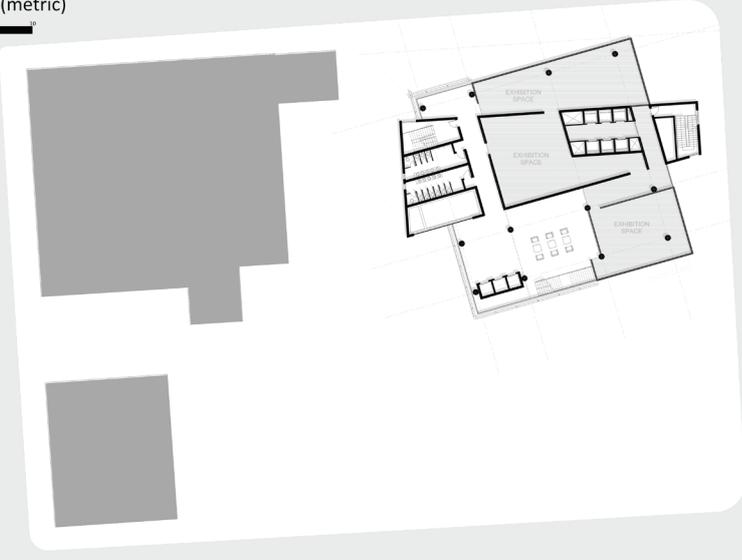
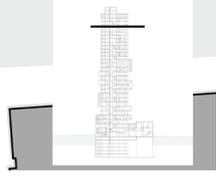


Figure 54 -
Top Gallery



South View
scale 1:200 (metric)

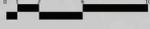


Figure 55 - South Elevation

East Elevation
scale 1:200 (metric)



North View
scale 1:200 (metric)

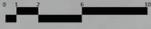


Figure 57 - North Elevation

West View
scale 1:200 (metric)





Figure 59 - Building Section A-A

Section B-B
scale 1:200 (metric)



Section C-C
scale 1:200 (metric)



Figure 61 - Building Section C-C



Figure 62 -
entrance view



Figure 63 -
south-west view



Figure 64 -
south-east view



Figure 65 -
south-east corner

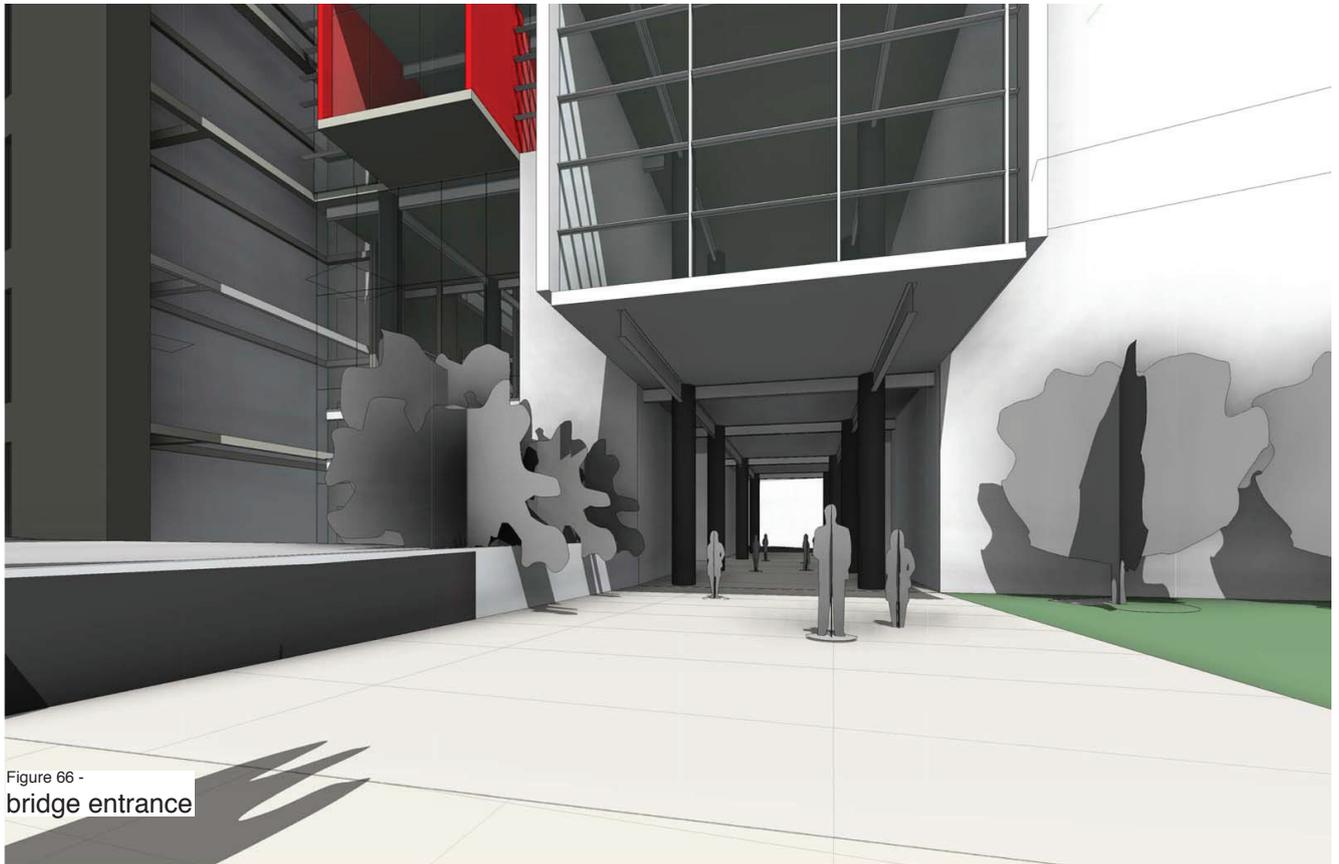


Figure 66 -
bridge entrance



Figure 67
plaza view



Figure 68
art studio

thanks

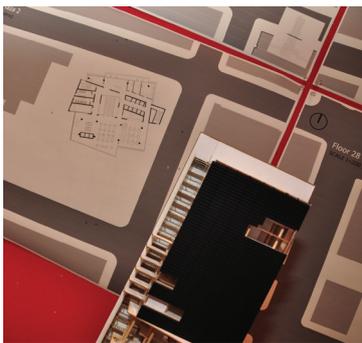
Thanks to my committee: Jaan, Susan and Paul. Thank you for pushing me harder and for guiding me to new discoveries.

Thanks to my family, who have always been there for me. Thanks to my mother. Gracias mamá por tu gran apoyo; por siempre estar conmigo, eres mi ejemplo a seguir.

Thanks Marilyn for being my love, my companion and my best friend. Gracias por nunca dejarme caer, por siempre ayudarme a superarme y a crecer. Gracias por todo tu amor.

Thanks Antonio for always being there. You are like my brother.

And to all my friends that help me through my discoveries on Art and Architecture, Thanks



photographs by Antonio Paz

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All images, drawings and collages are produced by the author.

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