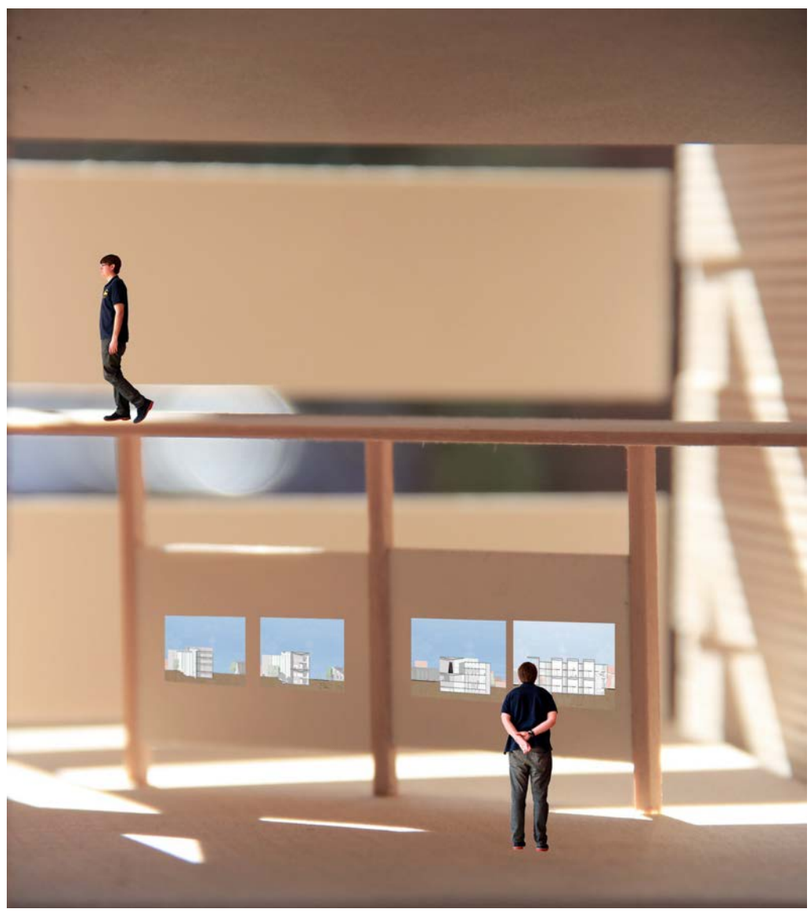
[TITLE]



Gallery with images of sections

Adopting an Orphaned Collection

by

John Salmons

Thesis submitted to faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the defree of
Master of Architecture in Architecture

Marcia F. Feuerstein
Paul Emmons
Susan C. Piedmont-Palladino

Sept. 28, 2015
Alexandria, VA

Art, Gallery, Light, Shadow, Reflection

[ABSTRACT]

Light/Shadow study on
Bridge Model

Adopting an Orphaned Collection

by

John Salmons

"Architecture itself is linked not only to other arts but also to the broader context of life; it is only on that scale that we may understand its specific contribution to the formation of the communicative space of culture."*

- Dailbor Vesely 2004

Architects have explored Art Galleries as a medium throughout the ages. In 2014, the Corcoran was sold, dismantled and divided between the National Gallery of Art and George Washington University signaling the end of an era of art display in the Nation's Capital. This transformation of a major DC art collection was the impetus for this thesis: to mark the end of an era and to create a new home for the Corcoran Collection. To house this orphaned collection, I have studied similar elements that earlier architects have studied such as light, shadow, and reflection, taking into account the dawn of the next generation of art galleries. The role of this museum is to educate and facilitate information about the collection and the art. Contemporary art galleries that have been built recently included additional areas of services that were originally not part of the Corcoran Museum's building program, such as the role of conservation of historical objects including paintings and works on paper. Another area of my research was the relationship between the viewer and the building. The Corcoran has an extensive collection of American art and art directly from D.C. and it is important to allow direct access for the community and accommodate enough wall space to give context to the art.

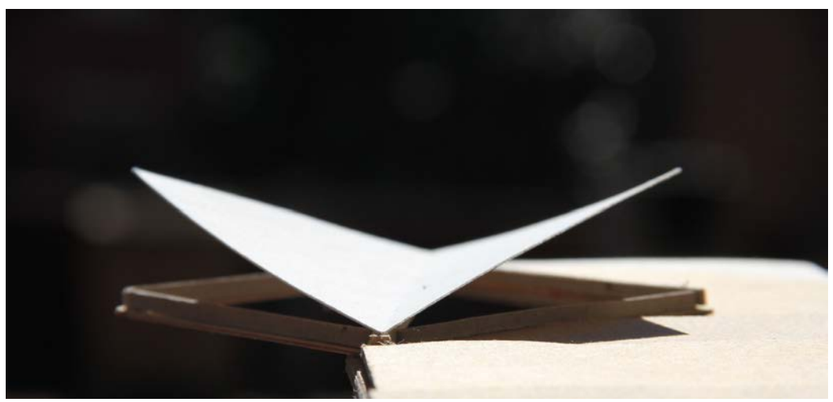
With the setting of the contemporary art gallery framed, we return back to the research to really question how each of those elements were thought about moving forward. We need light to see, but what had been seen and depicted on great Master's canvases should be protected from light. Should natural light be brought into the gallery spaces even though it damages works on canvas and paper? Can gallery spaces change over time to mirror the objects that they hold? Can the building reflect the area around the gallery but also act as a space of meditation and self-reflection?

To adopt means to take another's child, but it can also mean to embrace an idea. In this case we are adopting the collection of William Corcoran and combining it with newer elements found in modern museums. On further evaluation of the gallery it has strong ties to historic D.C. because of its collection and its community outreach however its weakness was due in part of turning its back on the same community that made it strong. I propose moving the collection into the heart of Washington D.C. and combining it with newer ideas of light and gallery services. This process will allow the Corcoran to continue its evolution as a great American collection.

*Dailbor Vesely, "*Architecture in the Age of Divided Representation.*" (Cambridge: The MIT Press, 2004), 88-89.

ADOPTING AN ORPHANED COLLECTION

[ACKNOWLEDGMENTS]



Study Model of Roof
during the day

"Inspiration must already have something of a promise of being able to express that which is only a desire to express, because the evidence of the material making of light gives already a feeling of inspiration."**
-Louis Kahn 2013

The following people and spaces have entered my life and have left the greatest impression on the shaping of my understanding of the World.

National Gallery of Art: I would like to thank all of the staff at the National Gallery of Art who have dedicated their careers for the preservation of the East and West Wings. I would like to especially recognize Susan Wertheim and Michael Gavula, and the rest of the architecture department. While I was there they brought me into their work and granted me access to the back of house spaces, which without this wonderful experience would have made my thesis that much harder.

Graduate School: I would like to thank all of the faculty and staff at the Virginia Polytechnic Institute and State University WAAC campus, especially including my thesis committee, Marcia Feuerstein, Jaan Holt, Paul Emmons, and Susan Piedmont-Palladino. I would also like to say thank you to Carolina Dayer who helped me start the process. As a whole they helped take my basic understanding of the world and surrounding space and taught me how to develop my projects to the next level.

Undergraduate: I would like to thank the entire faculty at The Catholic University of America, College of Architecture. They helped me grasp the understanding of the role and tools required to be able to become an architect. I would especially like to thank Jay Kabriel and Julio Bermudez.

High school: I would like to thank Susan Johnson and the faculty and staff of Commonwealth Academy for teaching me how to tackle each challenge in life by taking it one step at a time.

Family: The closest people to me my Mother, Father, and Remy: I thank you for your enduring support.

** Louis I. Kahn, "*Silence and Light.*" (Zurich: Park Book, 2013), 26-27.

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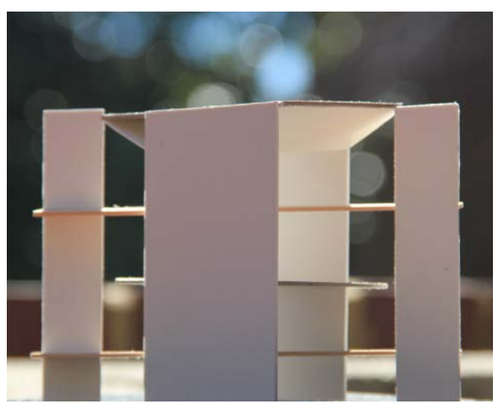

Study model of
Gallery

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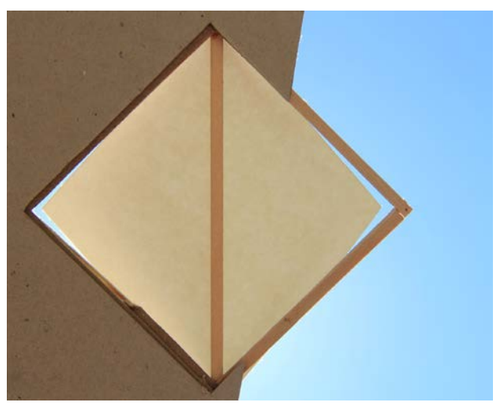


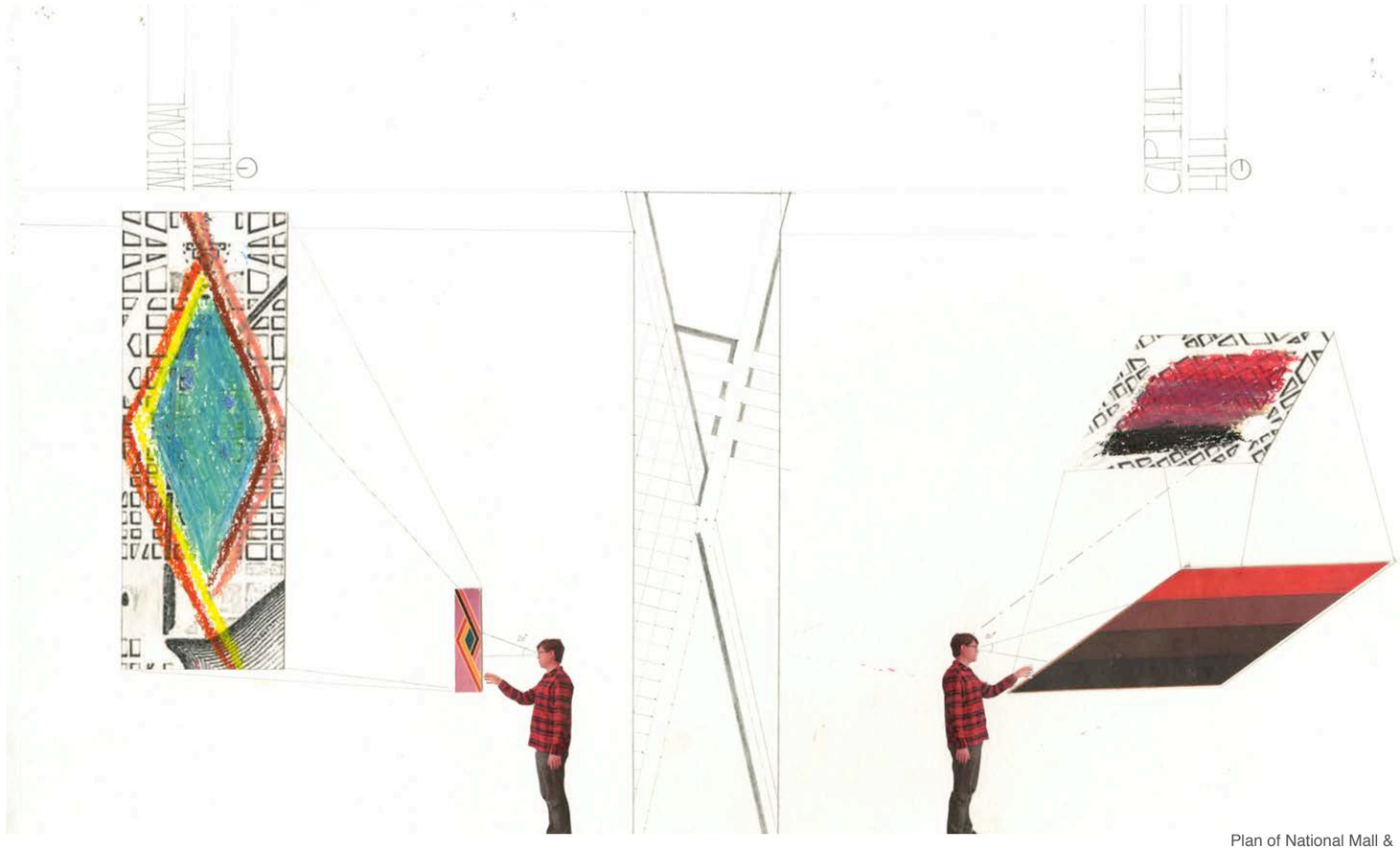
Study Model of Roof during the day reflecting the shape of Washington D.C.

The city of Washington, D.C. has a strong history connected to cultural institutions. Just take a walk down the National Mall and one will find a range of buildings dedicated to the Arts, Sciences, and History of America. One of the first galleries to open in the city was the Corcoran Gallery of Art, which opened its doors in 1869. Mr. William W. Corcoran, for whom the gallery is named after, started his collection with a focus on American artists. He felt that there was a need to acquire and display great American artists just as other great nations have displayed their own artists before. At this time his collection of only American artists set him apart from other American collectors who where mostly collecting European and other country's antiquities. Moving forward the Corcoran Collection continued to grow sticking to their mission of collecting great American artists. Today it holds the likes of: Mark Rothko, Frank Stella, Georgia O'Keeffe, Jackson Pollock and Andy Warhol. The gallery also includes one of the largest collections of the Washington Colorist Movement, which started in the District. However, even with such a large collection it became difficult to manage, as attendance and fundraising dropped. The future of this great collection became unclear, and a new home was needed to house the art.

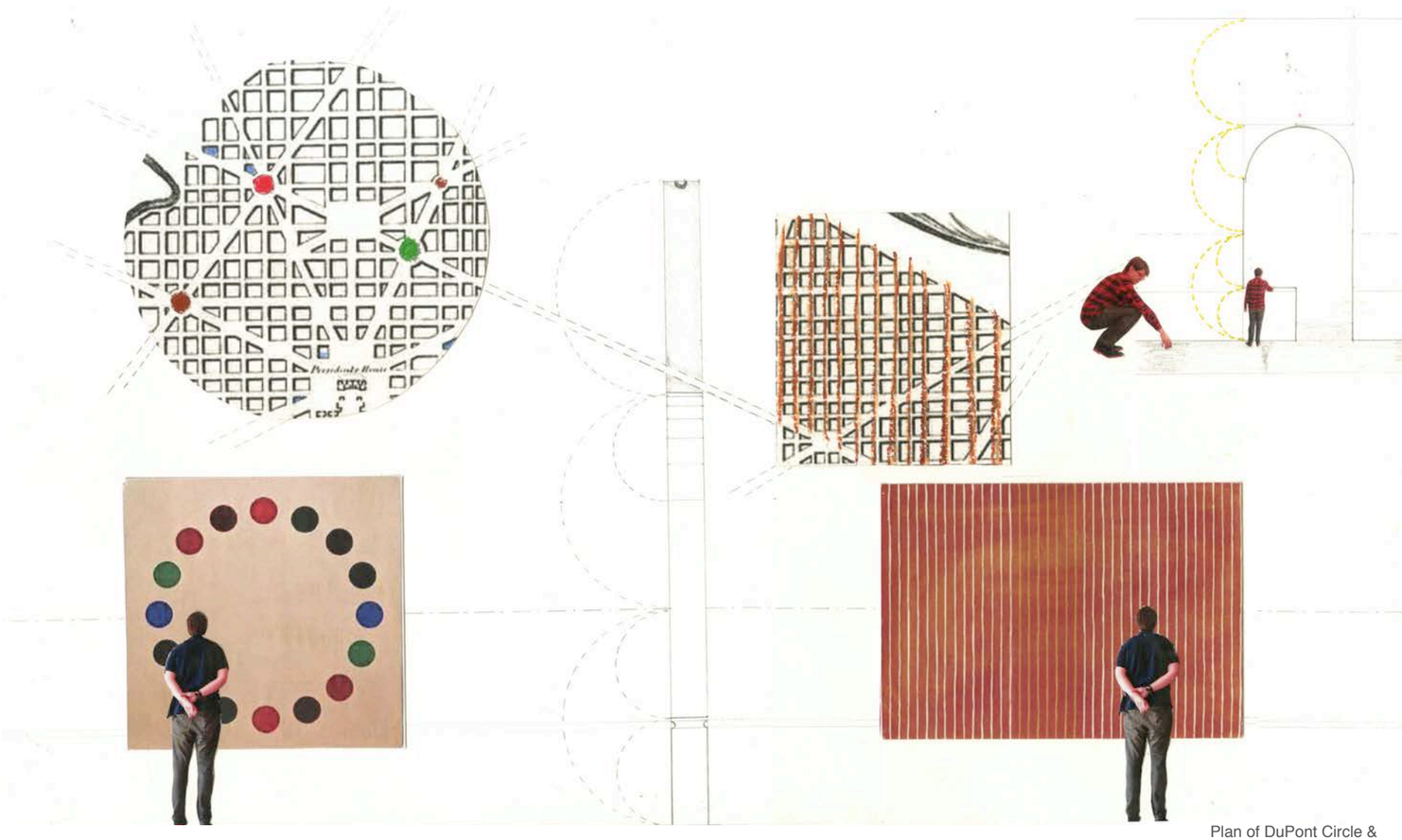
With my interest locked in on designing a new home for the Corcoran, I examined their collection of artwork and became interested in the Washington Color School. It made sense for two reasons, if this was going to be a gallery for Washington D.C. it should be connected in some way to the history of painting in the city. Another aspect was for the strict geometric patterns which I felt picked-up on L'Enfant's design for the city. After examining the collection of paintings and the map of the city this process led me to four neighborhoods and paintings: the National Mall which matched Sam Gilliam's Comet-I, border of Capitol Hill and Eastern Market which matched Kenneth Noland's Brown Stretched, a series of circles such as DuPont Circle which matched Tomas Downing's Ring Three, and lastly there was Gene Davis' Pumpkin, which picks up Stanton Park.

Out of these four options I felt a connection with Kenneth Noland's painting. So the Capitol Hill and Eastern Market neighborhoods made for a great area to look for a site because both have a lively bar scene and are creative centers for Washington, D.C, each represented by their huge wall murals. This would allow the gallery to tap into a neighborhood culture and act as a resonator for communicating its own ideas and values. This project would be challenging on the National Mall because it represents America as a whole and therefore it cannot focus on just the context around it. Ultimately, I selected a vacant site along Virginia Avenue which parallels I-695 between 7th and 8th street. With a site now located it was important to move forward with a building that could not only reflect the artwork within but also reflect the site which it is on.

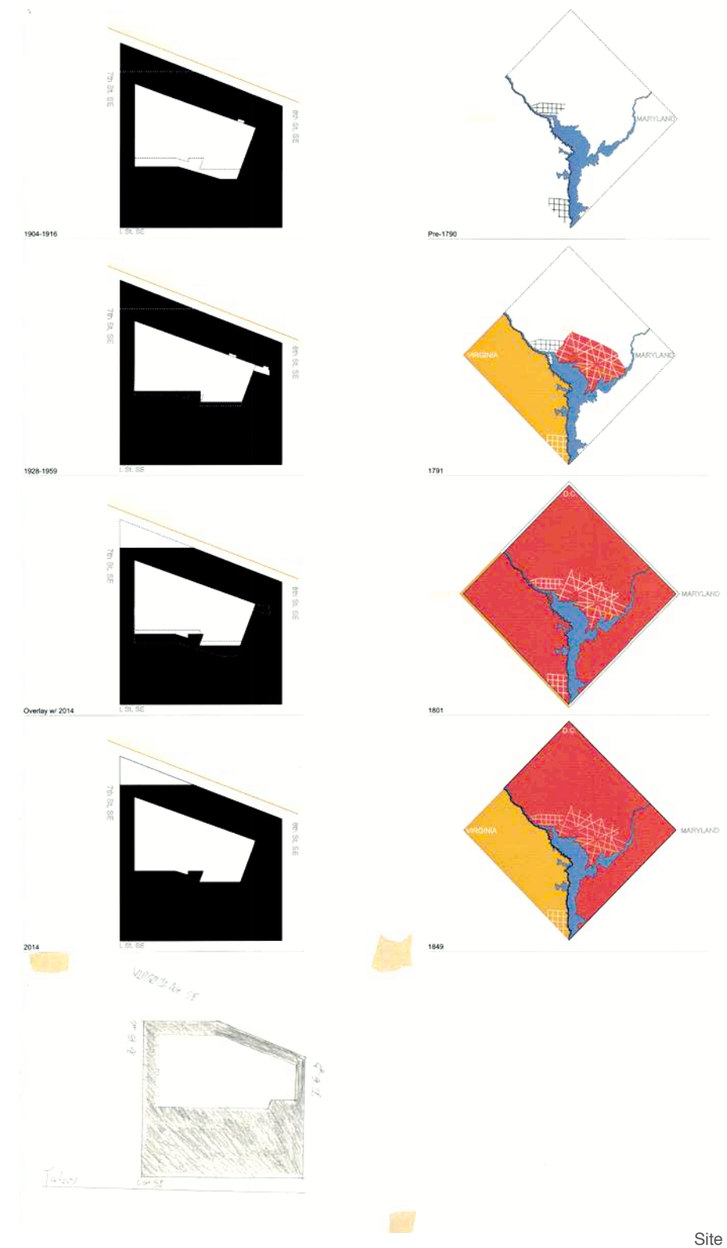
L'Enfant's original plan of the District, overlayed with art galleries, and site location



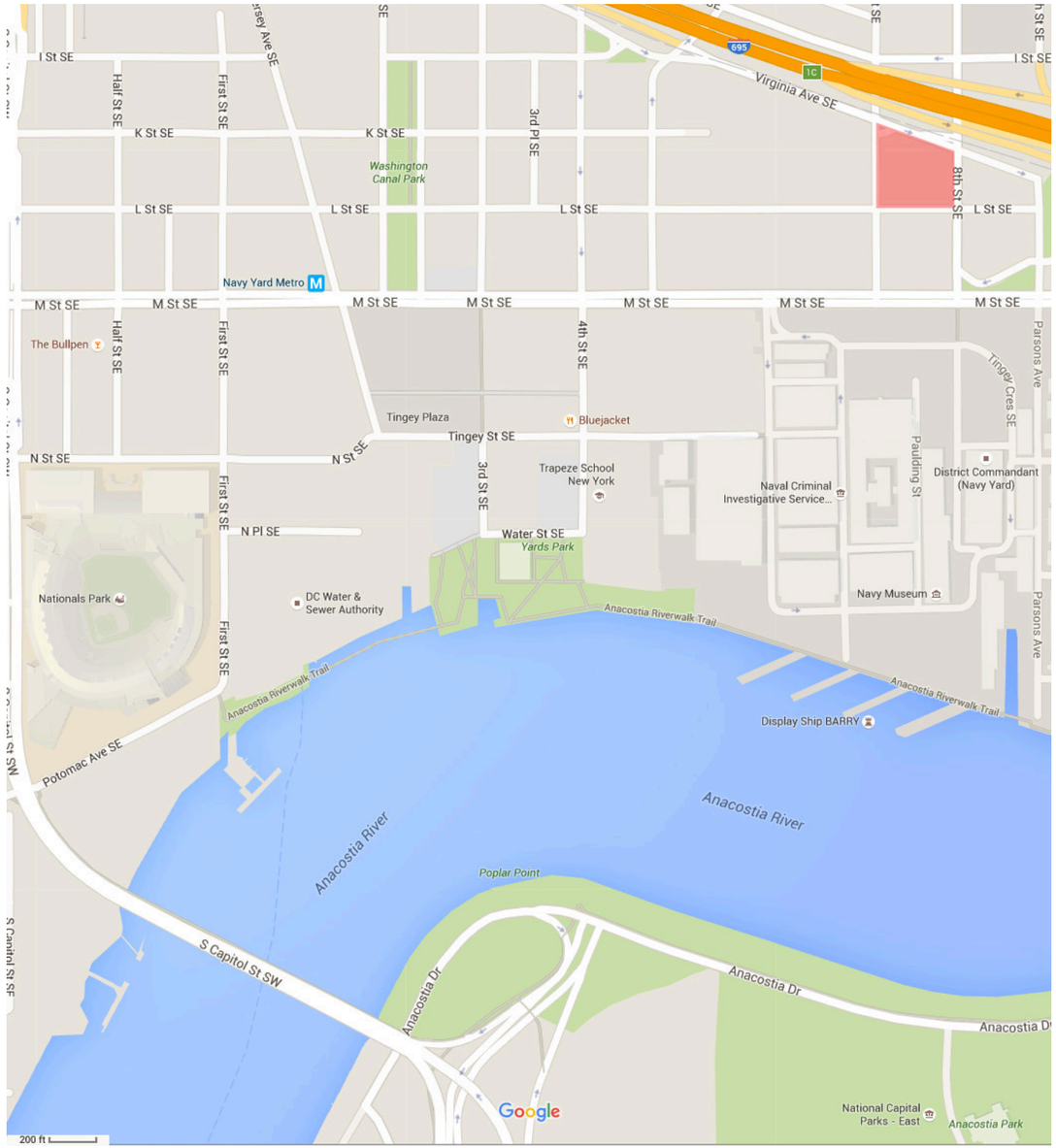
Plan of National Mall & Capitol Hill, Overlaid with Washington Colorist



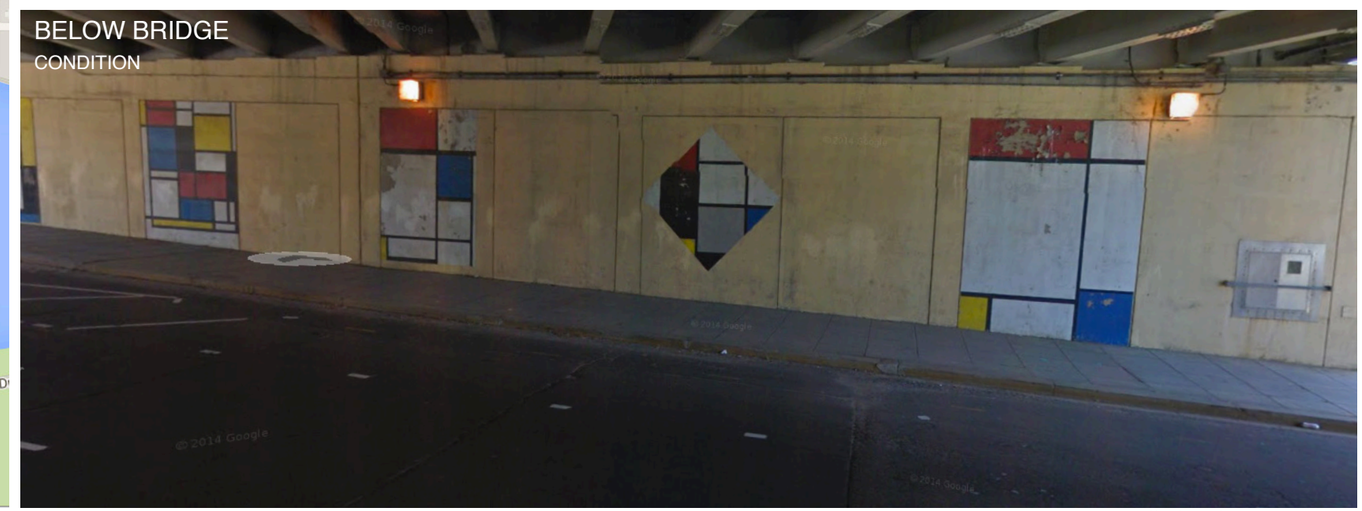
Plan of DuPont Circle & Stanton Park, Overlaid with Washington Colorist



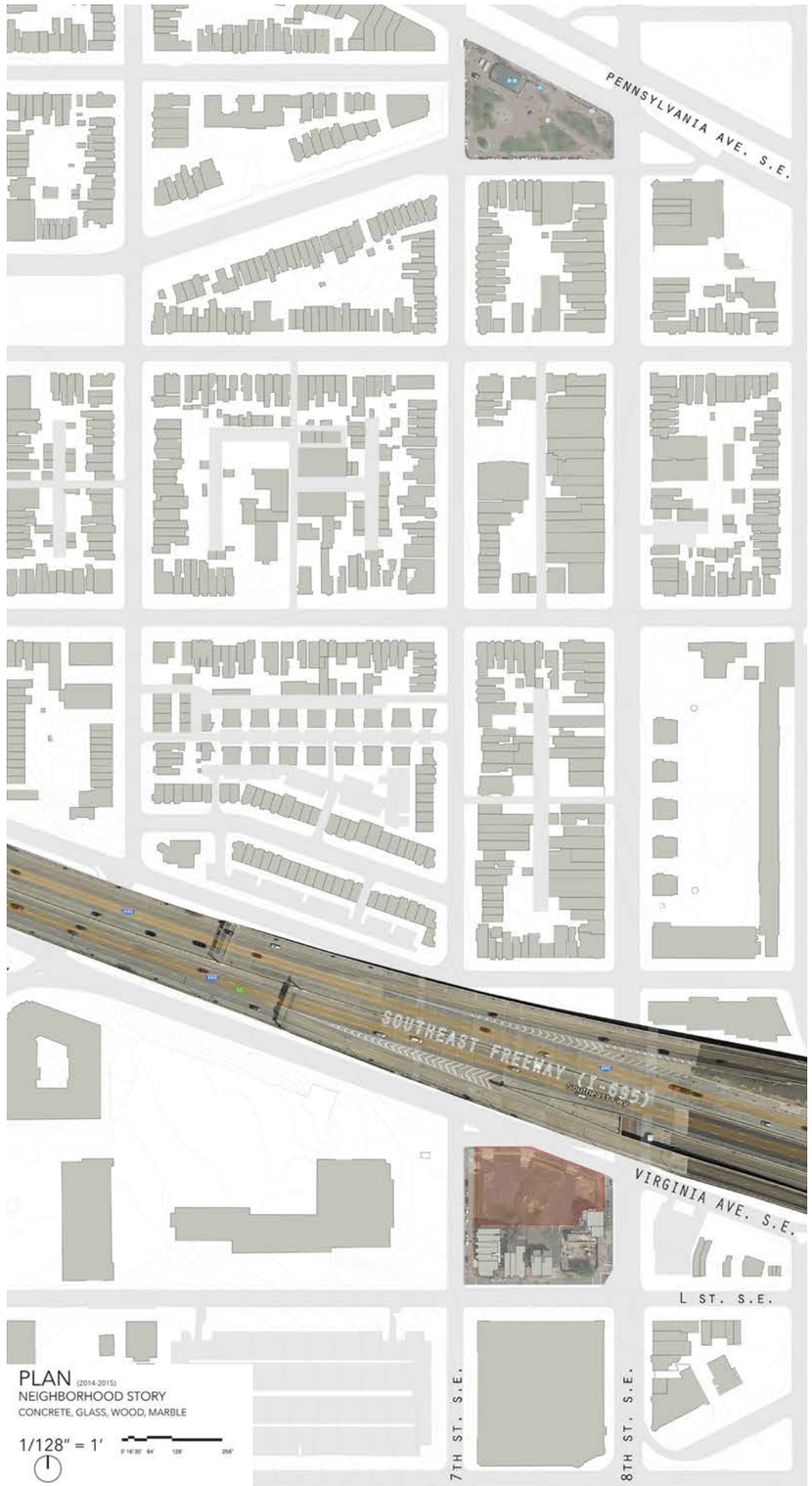
Site plan and the District's border over time, from 1790's-today

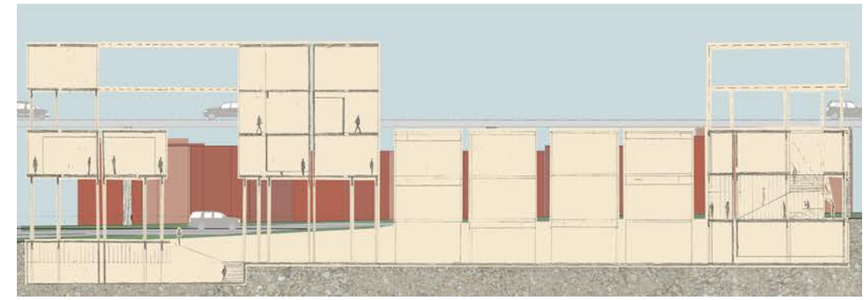


Southeast Freeway directly next to the site, during light traffic



Southeast Freeway underneath the bridge directly next to the site





PROPOSED
Site section along Virginia Ave. showing the early stage of the project, with view corridors

PROPOSED
Site section along 8th Street showing the early stage of the project, with view corridors

[ARCHITECT'S EYES]

Periscopes for re-viewing
the site

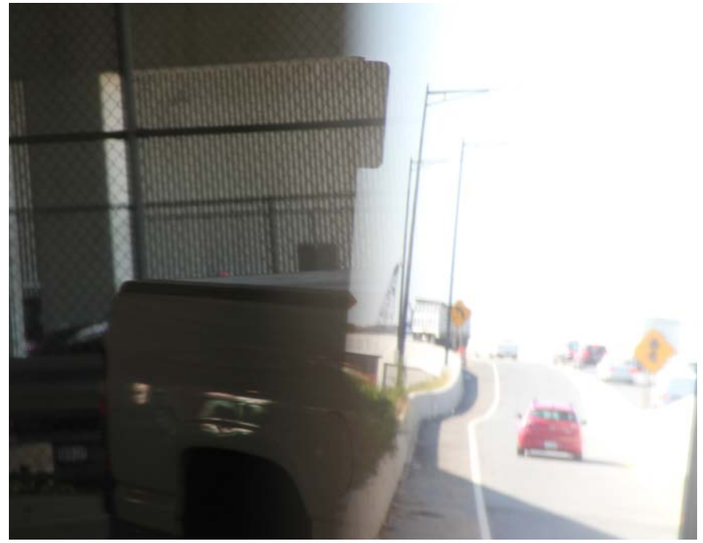
For centuries the Architect has had three main types of drawings to represent their designs: the plan, elevation, and perspective. So during the early research portion of my thesis I made three tools that would help me see as the ancient architects would draft their designs. I used these tools to collect photos of my site in Southeast D.C. on the border of the Eastern Market, Capitol Hill neighborhoods.

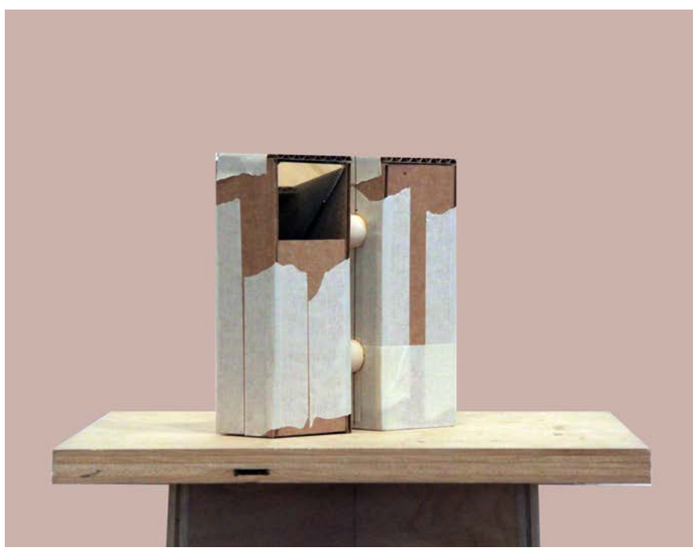
Each tool or periscope is designed to blend two views together to allow the observer to experience two realities at the same time. The first periscope blends the plan and reflected ceiling plan together, the next one combines the left and right elevation together and the last one blends the right side-up and up-side down perspective together. The photograph shown to the left is a photo of the tools. The photos on the following page are demonstrative of the tools in use:

A. Connection to Earth and Sky – Good Light, to Bad Light
B. Change of Scale from Interstate to Neighborhood – Connection of views through the building
C. Blending of Nature and the City –Gallery Space to Sculpture Garden

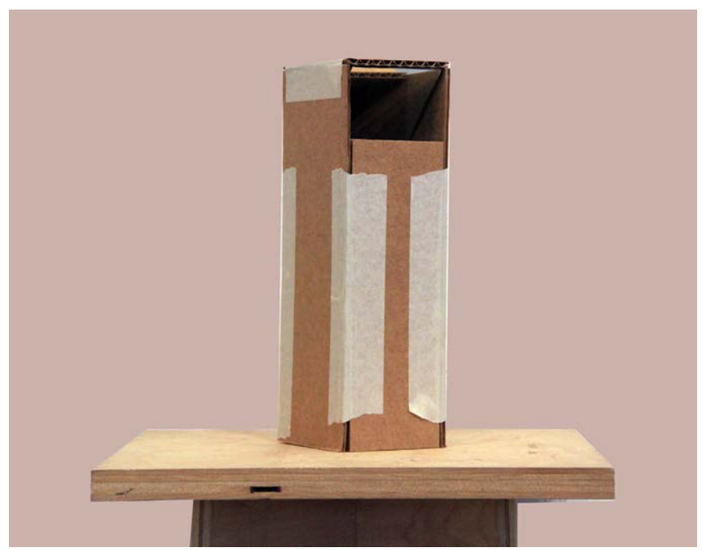
During the collection process I left the site with a few key impressions, of sights found around the site that would end up being reflected through the rest of the project. The first discovery that I had after using the periscope was related to the connection of the earth to the sky. An architect would see this through the plan (earth) and the reflected ceiling plan (sky). Studying the earth around the site or the city plan one notices the main arteries are the streets named after states and the points of interest are located along their path. The plan was conceived based on the same principle allowing the visitors to have a free flowing path to the galleries. The Roof and Reflected Ceiling Plan (RCP) became intertwined because the drawing focuses the architect's attention not to the layout of spaces but to the design of the roof. This development of the roof was driven by this concept that with careful consideration with the slopes and angles would allow soft north light in and block out the harsh direct light. The next impression was the change of scale from the large twelve lane interstate to the neighborhood scale. The building would need to connect the neighborhood to the road. The first step was creating view corridors through the building to open views directly into the gallery spaces, which allows pedestrians and cars alike a view into the galleries. The second step was to create two 'ground levels' one at the base of the building and the other elevated to meet the expressway. This allows the guest in the building to meet the expressway and vice-versa. Which takes us to the last impression that I felt was important: blending of nature and the city. This was done by creating a space for art inside and outside of the building. The large sculpture garden in the back of the building gives the guests opportunity and time to pause during their time in the museum, to move outdoors, and view the artwork both in the garden and the interior. This idea is also to introduce the car as well. Above the entry for the pedestrians is an outdoor terrace located at the same height as the expressway, this allows passengers a glimpse at the sculptures on the terraces. Whether on a trip to or through the gallery it is important to take time to reflect on life.

After collecting images from the site, it was time to go back to some built examples and study them further. I came up with some diagrams examining how spaces are layered. In a traditional art museum the spaces are layered like a cake, separated out so that each space has its own area. The gallery spaces are front and center with the services space hidden away out of sight. Looking back at the periscopes, I developed some diagrams of different ways to combine spaces together. So instead of going after a layered cake it was going for more of a stew, which had structure but would allow the blending of the gallery and service spaces together.

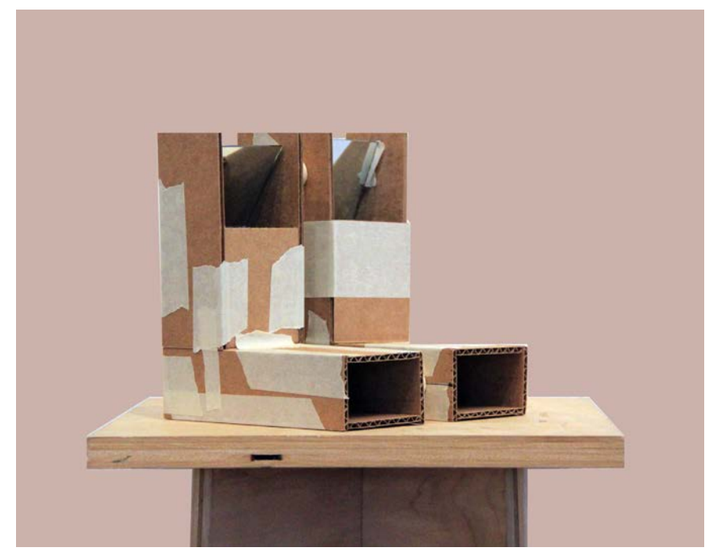




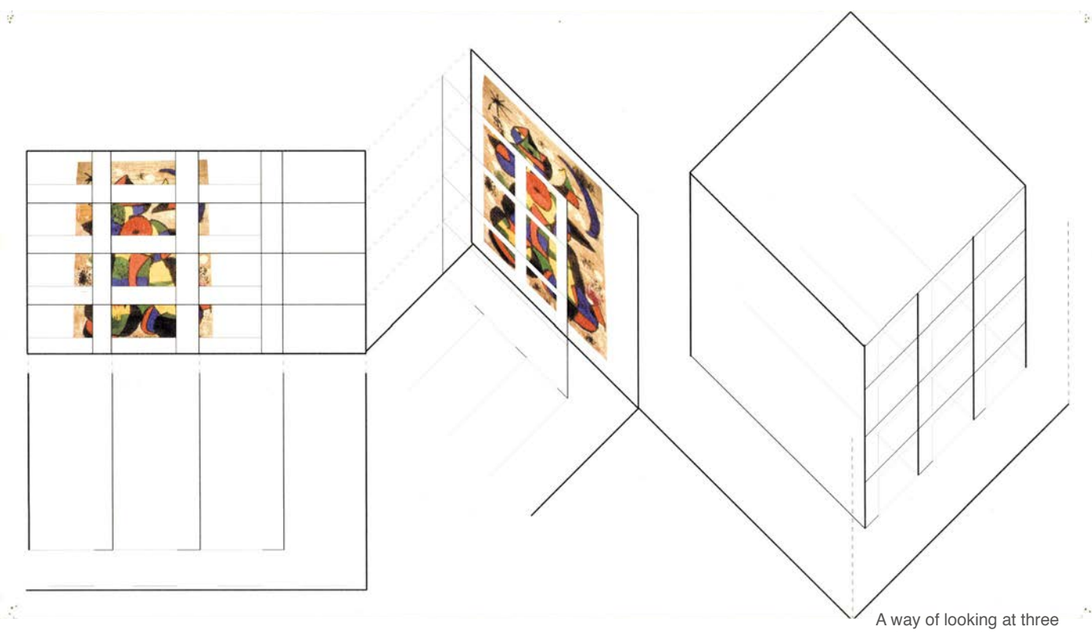
A. PLAN & RCP



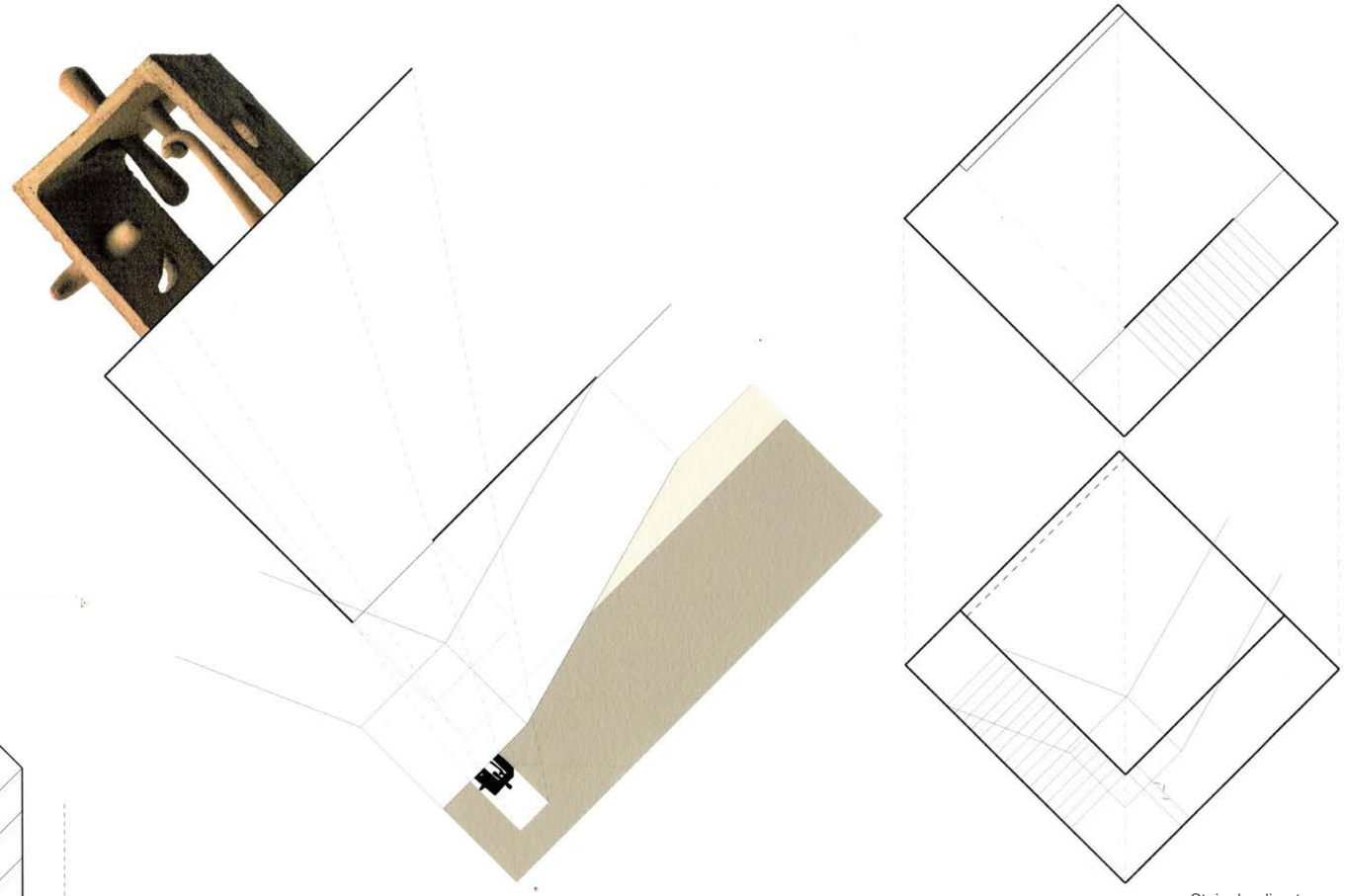
B. ELEVATION



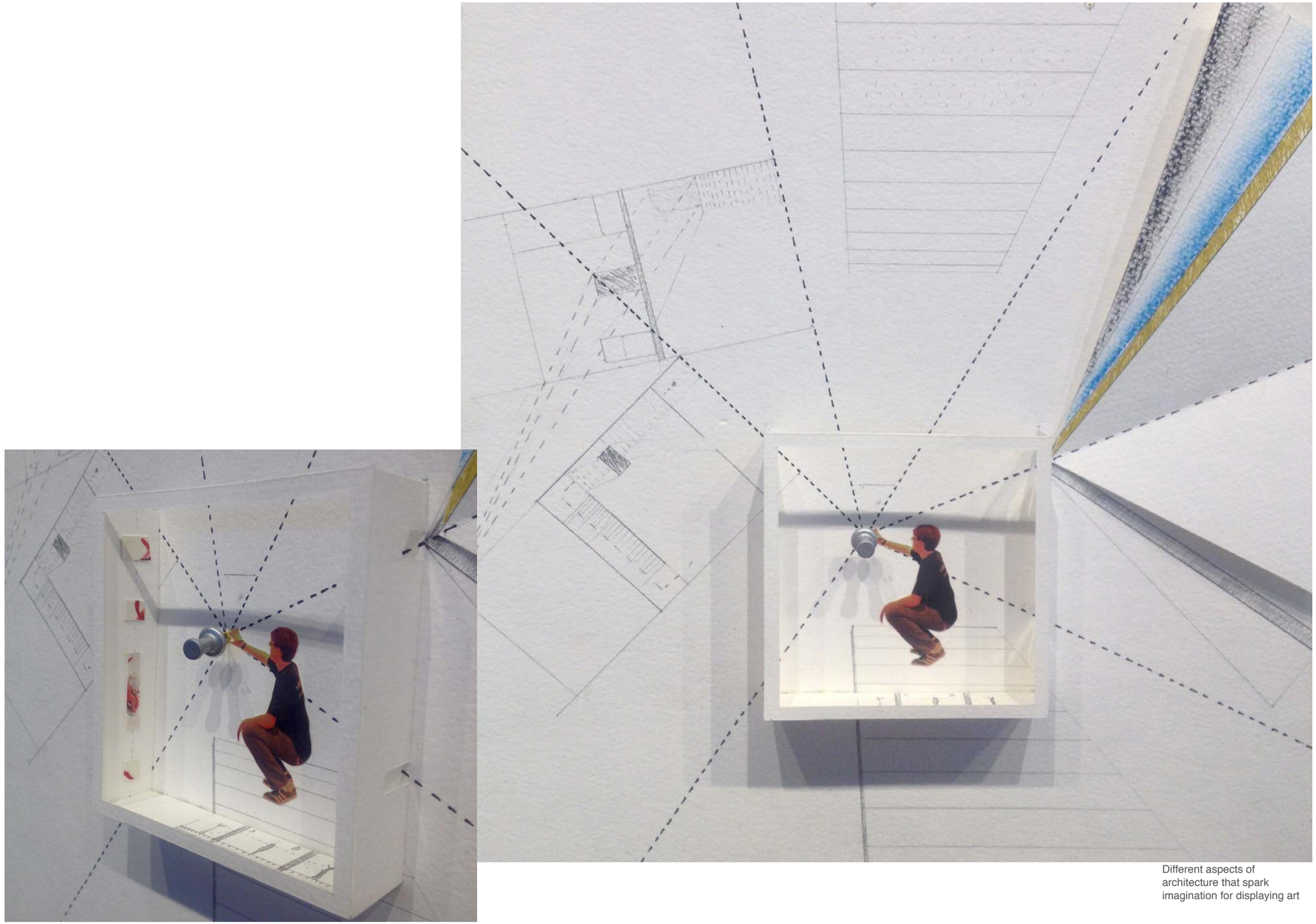
C. NATURE & MAN



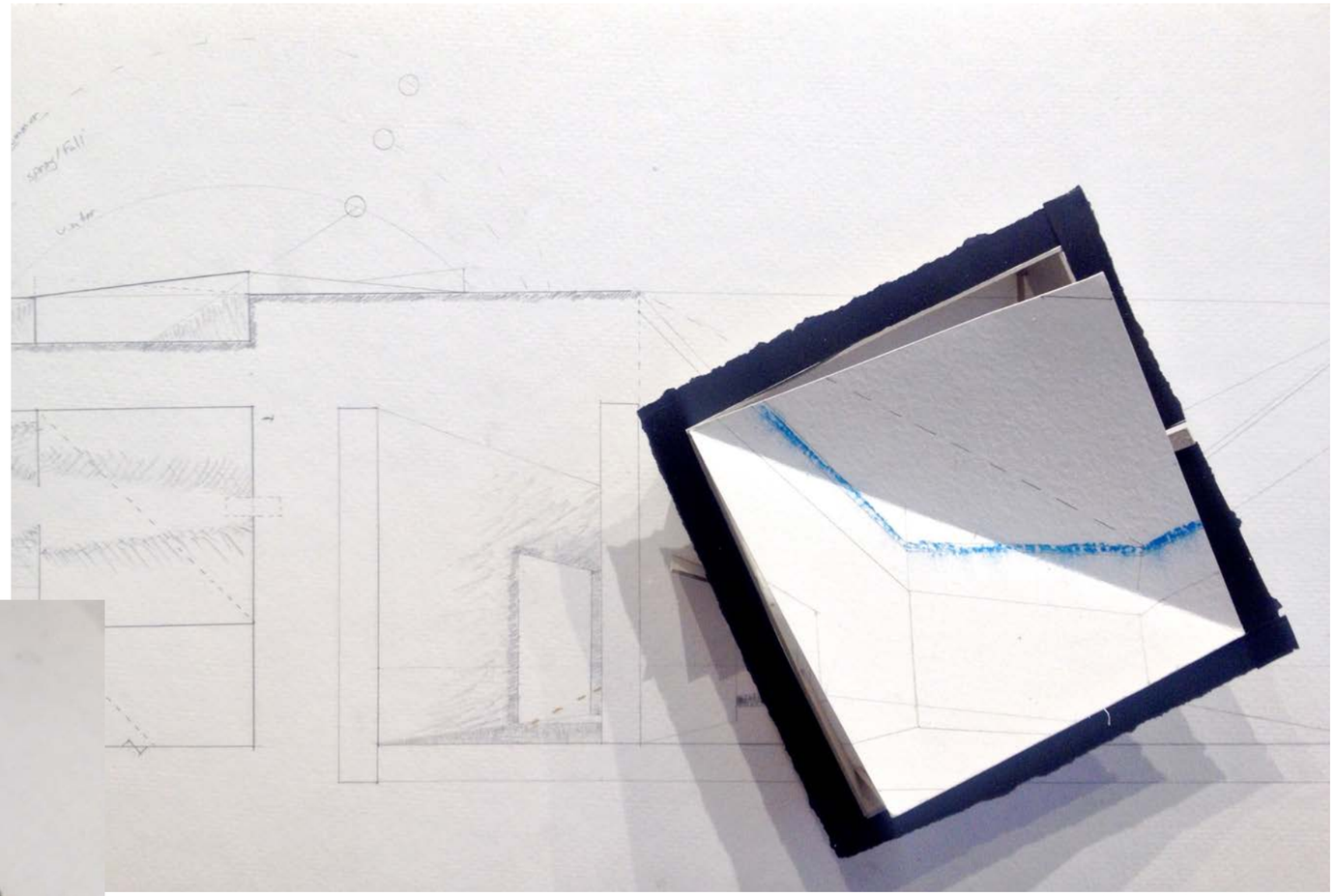
A way of looking at three orthographic drawings at the same time

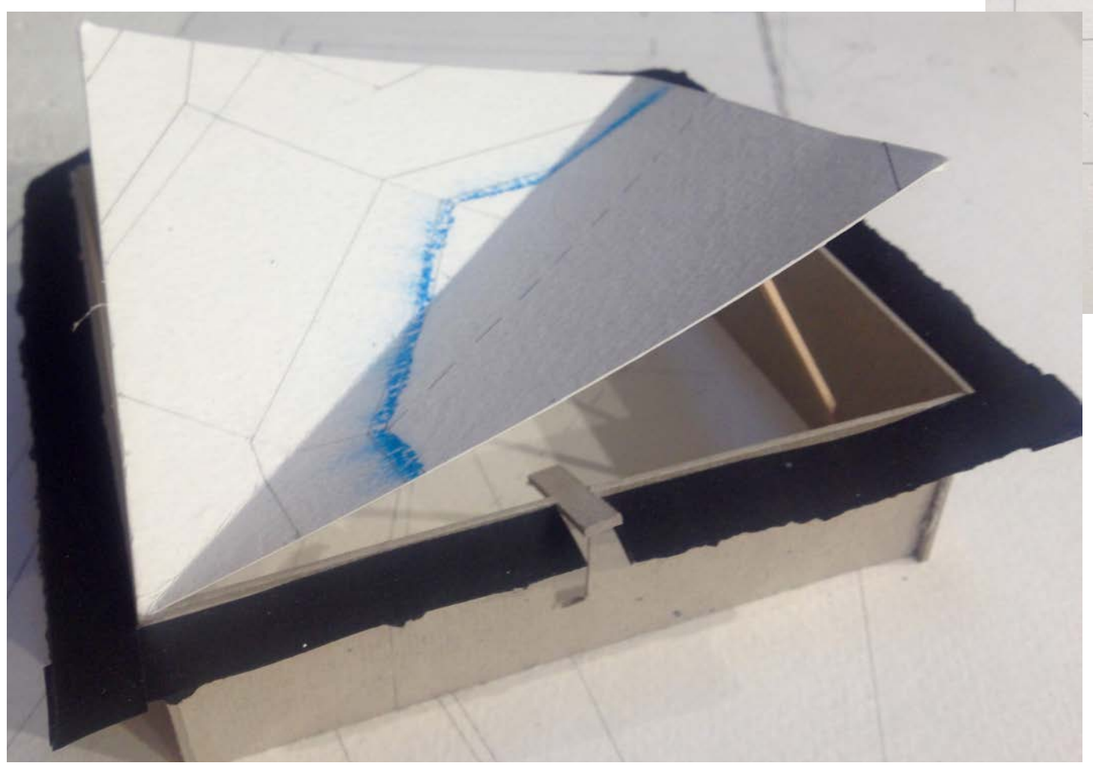


Stairs leading to mezzanine Gallery with shadow of sculpture to pique your curiosity



Different aspects of architecture that spark imagination for displaying art

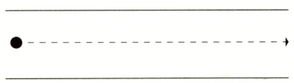




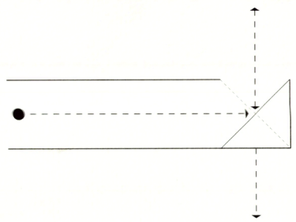
Ways of getting light into the gallery marked by shadows throughout the day

Diagrams/Process

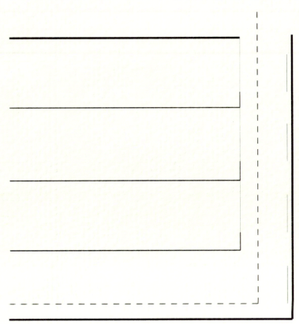
Up-Down



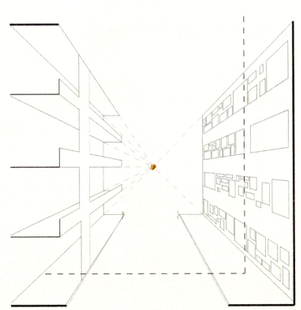
Typical



Tool

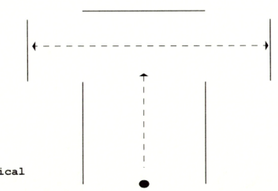


Section/Plan



Section/Perspective

Left-Right



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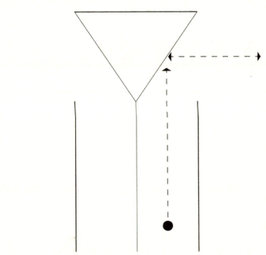
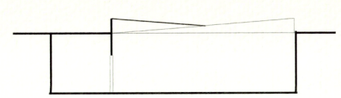
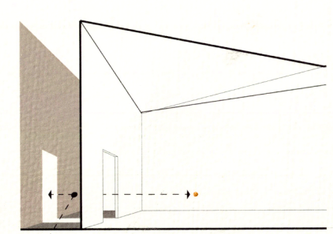


Tool

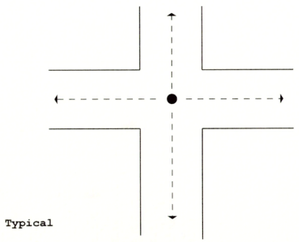


Section



Section/Perspective

Front-Back



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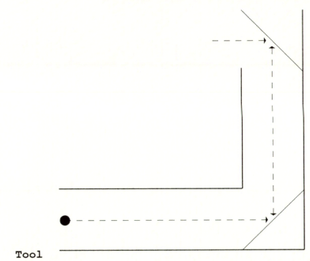
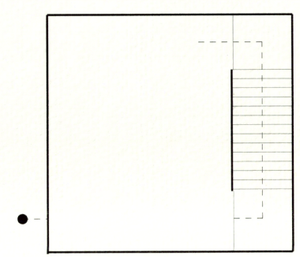
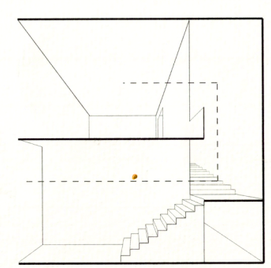


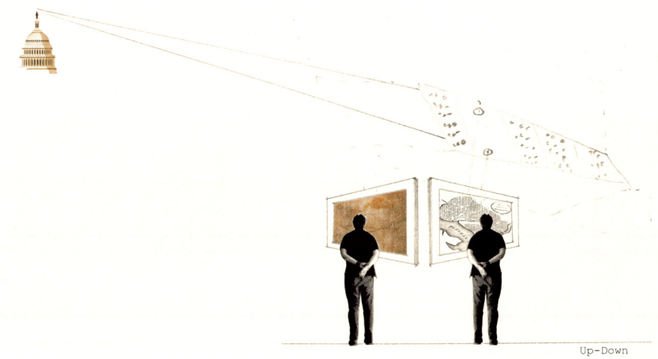
Tool



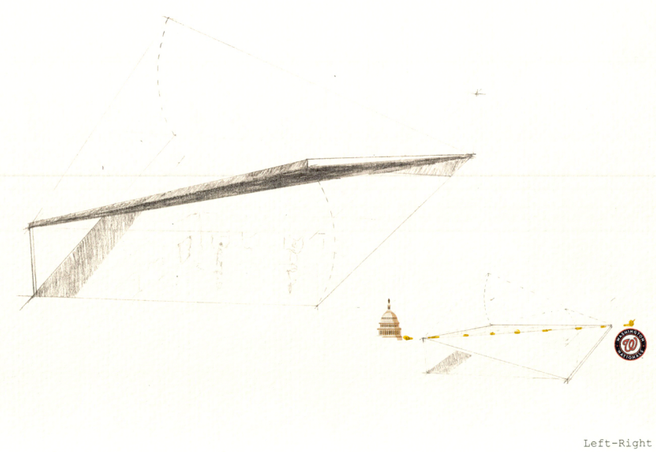
Section/Plan



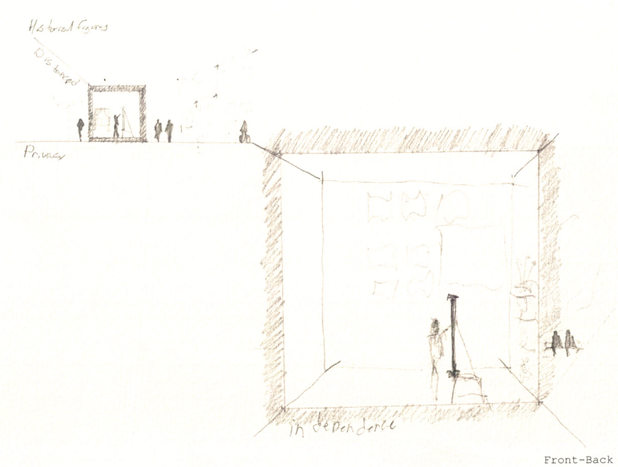
Section/Perspective



Up-Down

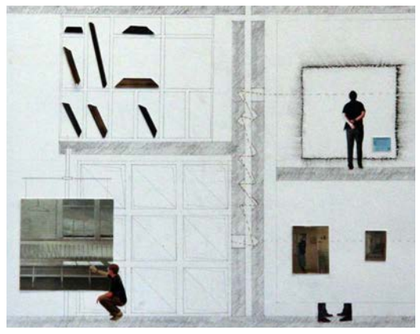


Left-Right



Front-Back

[BESTIARY]



Left: Beast drawing, Section/Detail
of Conservation Gallery
Right:Beast drawing, Section/Detail
of Gallery with a light well

The fragment of space and light:

Architecture has a distinctive language, which separates the perspective reality of our eyes from the built world of Descartes' Cartesian plane. When the architect works on a drawing in the orthographic world the elevation and plan are designed in a world to which our eye is not naturally attuned. However, the advantages of the orthographic drawings are that they can be measured off of and used to construct buildings. Over time architects have developed the drawings to deal with the shortcomings of our eyes. These techniques such as tonal differences in line weights and other such measures have tried to trick our eyes into seeing a perspective however there is still a divide between orthographic and perspective drawings. As spoken languages metamorphose over time so do architectural drawings.

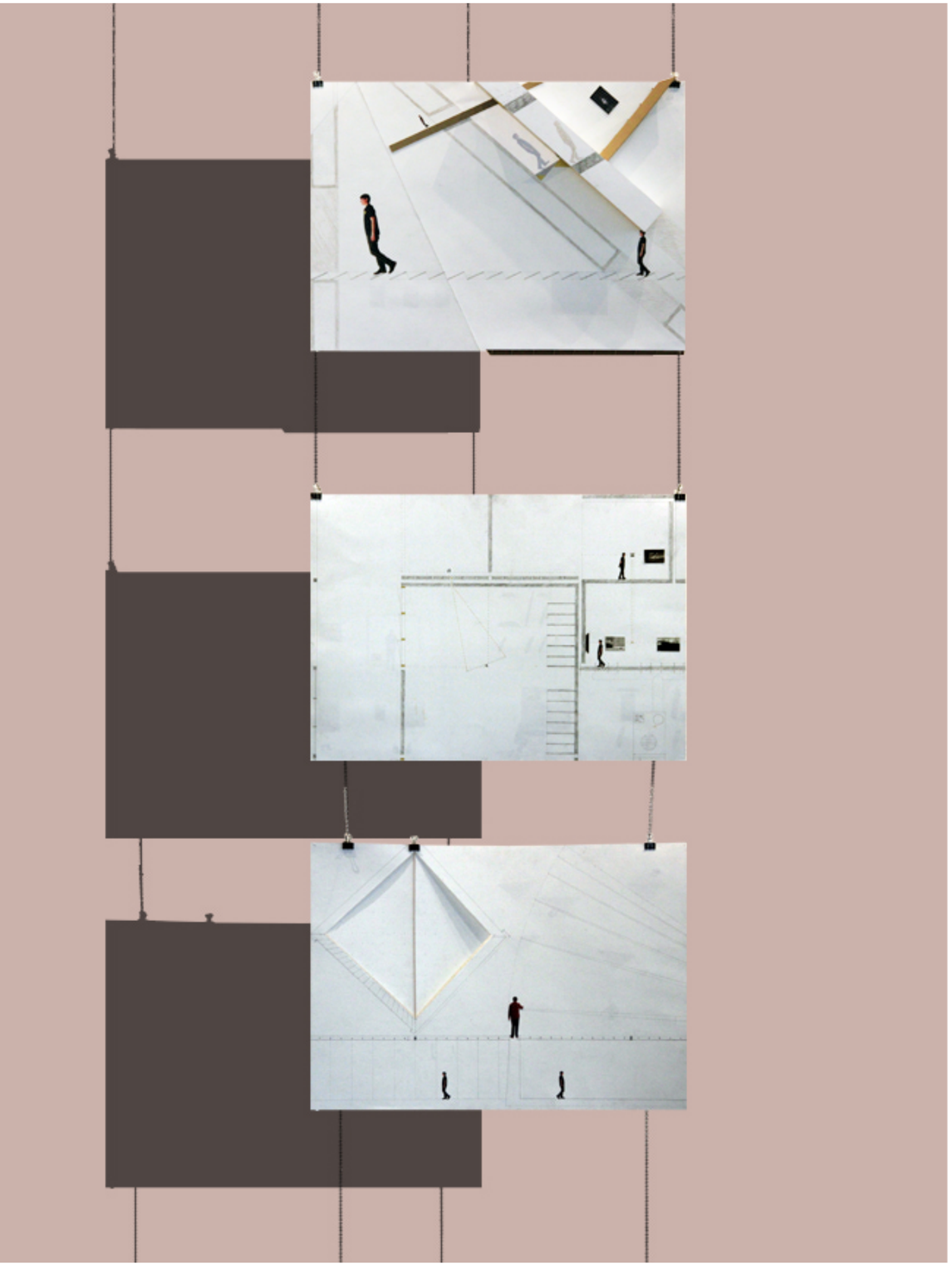
Recto:

The architectural 'beast' takes on two drawing methods, combining a section and perspective together and plan and model together. The perspective takes account of three buildings lying on different planes, which is why as one looks from right to left the three buildings shrink as they move closer to the horizon. Whereas the section is cut through a single point in an orthographic format which allows it to be measured. Above the section perspective is the site plan and enlarged plan with model. This drawing style reinforces the idea of the orthographic merging with perspective aspect, however it is done through 3D with the help of the model. This drawing technique helps to link the gap of the built world with the drawing world.

Verso:

Reversing sides to the world of the imagination our reality is woven into the drawing. When held up to the light the enlarged plan diffuses the light that would enter the building. The soft light flying around the roof seems to make it look like it is flickering in the air. This effect will be multiplied throughout the building several times creating light courtyards. Each courtyard will have a different angle applied to the roof. When these roofs are drawn over each other it seems as if the roofs are able to fly off into space. Successful joining of these two drawing styles allows the 'beast' to take off.

Metamorphosis allows for two different techniques to be joined together creating a new experience for the viewer. Looking into the nature of drawing there is one key element that is always reinforced which is the idea behind the drawing. The same cannot be said about traditional techniques, because styles tend to change over time as society progresses. The same can be said for architecture, which uses its drawings to represent the idea of space for a building.



Ask any architect: what is the most important element in an art gallery? Ranking high on their list would be light. Now, go ask the art conservationists: what is the most damaging element? Ranking high on their list would be light. Now go ask the artist what element they need the most? Ranking high on their list would be light.

But what does light need?
A gap, a window, a space, a wall.

Light needs a gap to sneak through. Light needs a window to warm. Light needs a space to a illuminate. Light needs a wall to be seen. Light gives us warmth, and with out it the world would be cold.

When light hits a painting, it starts a chemical reaction to the pigments in the paint. Over time, years, decades, centuries, the pigments change colors, typically due to the resin. Once the colors have darkened the conservators come in to conserve the painting, removing it from the gallery, leaving a feeling of emptiness behind. Marking its removal are two things, the wall discoloration, and a little note allowing permission for the removal of the painting.

While the painting is undergoing its restoration it moves into the conservation area of the gallery. This space has large light dampers controlling the exact amount of light needed for the project. During this process the conservator examines the level of decay and starts the reversal process. This room is full of other paintings waiting to be restored back to their original state. This process takes concentration and wits to be able to work on the great Masters' canvases. The building was designed with an additional wall that forms a protective skin around the spaces that allows and adjusts to daylight. This extra skin could be thought of as an additional blanket keeping the paintings safe and sound. The only element able to bridge the gap is light, which fills the space between the two close walls.

The light connects us back into the gallery spaces, where we find paintings by Rothko and Wyeth. The current Curator has been focusing on artists that study the windows. Looking past the paintings we find a small square full of light. Gazing into the object we find it reflecting an image of the painting that is currently being repaired. This periscope connects the public space to the gallery's private space. Weaving them together leaves the space warmer reminding us of the change of light and experiences of the space.

The window bridges the indoor world with the outdoor world, allowing in the landscape and light. However, if the window is open we add another element to the space: the temperature. Opening the window during the winter we allow the heat to escape and the cool to enter. The mixing of the two adds to the atmosphere of the gallery.

Conservation departments are now being incorporated into contemporary museums and are finding their way into traditional museums as well. Rather than looking at the space as the traditional light as part of the services space hidden away from the public but to really make it part of the museum's experience allows the guest to experience and understand another aspect that goes into operating the gallery. This also allows for more art to be displayed even while being worked on.

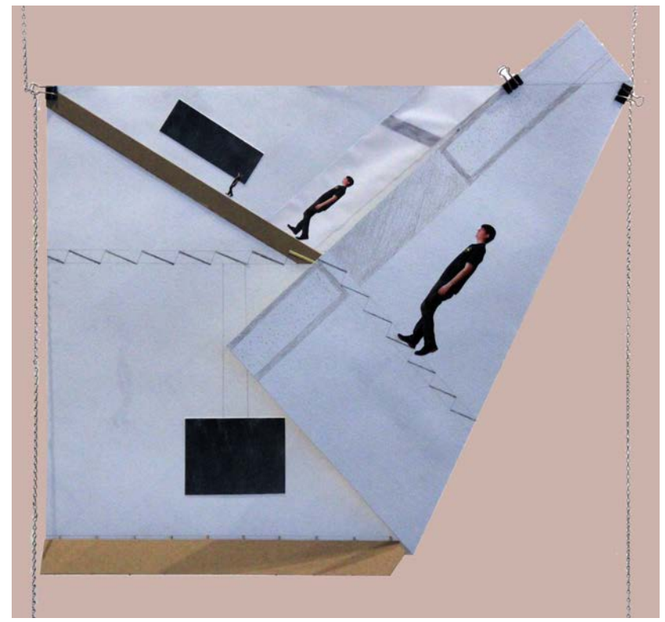
The Fold of Space:

A simple fold can change the way we see a space. It allows the viewer to interpret the same drawing multiple times from different viewpoints. It can change a two-dimensional drawing into a three-dimensional object. This property that a fold holds is quite important for an architect to understand. This method allows the drawing to unlock another way of interpeting the drawing revealing another element.

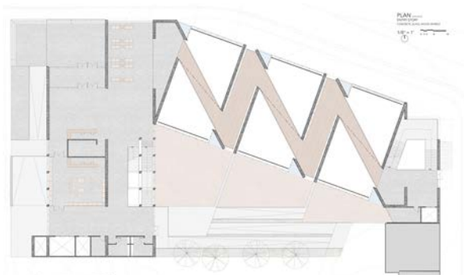
During this exercise it was important to work with light and develop a staircase system that would act not only as a means of egress but also act in the museum experience. The first step in the drawing was designing a lay light system that would control the amount of natural light that can enter the gallery spaces. Typically galleries that have skylights use a lay light system to diffuse the natural light which makes the light more uniform and even. In the simplest form all that is needed is an angle plane repeated across the gallery space. On closer examination of that typical light filter system it almost looks like a stair. By introducing the fold to the drawing now, we can turn the lay light system into a staircase. This fold now reveals the upper floors of the art gallery that are connecting through the staircase.

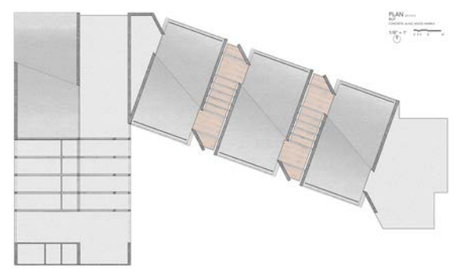
Just as the fold unlocks the drawing, the stair system in the museum unlocks another point of view in which to look at the art. As the guests move through the gallery spaces making their way down to the next floor they have a chance to reflect over the pieces that they have just seen. The stair acts as a point for the viewers to think and converse with their friends in an environment outside of the quiet galleries. The stairs can even act as a sitting space for guests if they need a much-needed break before they enter into the next gallery space.

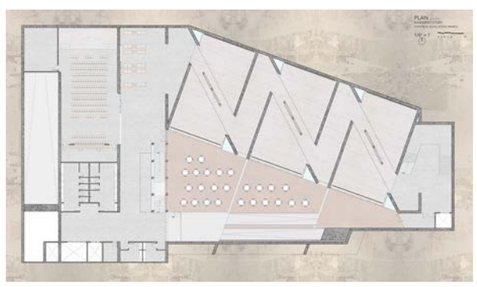
Introducing a fold into the drawing created a new way of looking at the drawing and created a new way to connect and move people through the gallery. Combining the stair system with the lay light systems allows for the guests to get a new look on timeless works of art and also keeps the paintings safe from light. The fold was the key to unlock these two elements to make it possible.

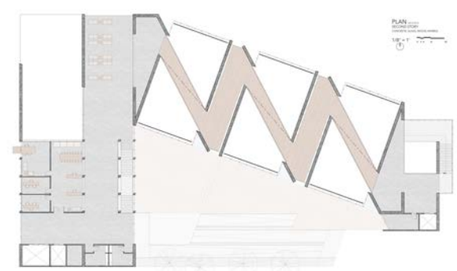


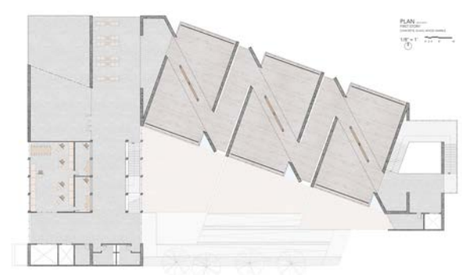
[DRAWINGS]











OVERVIEW OF BUILDING

PLANS: SUB-BASEMENT, BASEMENT, GROUND LEVEL

The plans demonstrate the connection between the building and the earth as it moves out from the ground.

OVERVIEW OF BUILDING

PLANS: LEVEL 1, LEVEL 2, ROOF

The plans show the organization of the gallery spaces, and distinction between the levels.

"The Sanctuary of Art – sort of the ambience of man's expressiveness – has an outlet, you might say. It is my belief that we live to express."***

(Louis Kahn 2013)

The following pages of images and drawings are all taken from the final presentation and will serve as the bulk of the work to represent the thesis. A brief description will follow explaining the way one might work their way through the building:

As we enter the building off the SE Expressway we can already see how the building functions as a whole. The areas that run parallel to the road function as the gallery spaces. The spaces that are perpendicular to the expressway are the service spaces that help run the gallery. Once inside the building you are welcomed within a large light-filled volume. This area acts as the parti for building a simplified version of the building whole, foreshadowing the experience, which will be repeated again in each of the gallery spaces. The next sequences of spaces are part of the backbone of the gallery. The backbone consists of areas for reflecting, for moving to each level and for reliving one's self. The reflecting area consists of a large seating area with views of the highway, which allows for the guest to reconnect into the outside world and is also a home for discussions about art which the guest has just seen. The stairs over look the sculpture garden and also allow the guest to view the exterior façade of the gallery spaces, which gives the guest a place of destination. The next series of spaces follow along with the stairs and change function at each level.

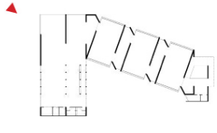
Starting at the ground level this space acts as a gift store, on the first floor it acts as an area for conservation and outreach, and on the top floor it is the area that houses the gallery's administration area. Now moving back to the seating area for reflection we can move into the galleries. We enter through a vestibule, which houses the information about the collection in the following galleries.

The galleries are laid out as follows: areas for double high two-story volumes, which pick up on the entry spaces as mentioned earlier and more intimate compressed spaces which break the building up into a rhythm. The double high spaces allow for larger scale artwork to be displayed in a salon style just as the historic Corcoran preferred. The intimate areas allow for the guest to move in closer and view smaller pieces one on one. The end of this path is marked by a large staircase which moves the guest to the next level of art. The staircase connects the guest to the building's surroundings and also is home to a large Alexander Calder mobile, the space connects the art to the public. Moving back towards the entry the guest gets to experience the large double high volumes from a mezzanine which acts a bridge connecting to the intimate gallery spaces. The mezzanine allows the guest to view the artwork from a different point of view, and allows natural light to reach more area which would not have been possible if there was a full floor. Returning back down to the entry we have the last areas, which are in the basement and sub-basement. The basement houses the large multi-function area, which can accommodate events and lectures. The final space is the sub-basement, which houses the gallery's storage spaces.

Digging deeper into the project the building starts to express its true nature of the thesis. Looking at the parts of the whole we can see the nature of the building reflected by each element. The transparency of the stairs and seating area allow the guest to reflect on their visit to the collection. The layout of the gallery allows the collection to be shown and viewed in its historical context but does not ignore the new site conditions. The design for the spaces inside the gallery allows for natural light be to reflected and softened so as not to damage the artwork. Imagining and designing a new gallery for housing the Corcoran collection has reinforced my knowledge and skills as an architect.

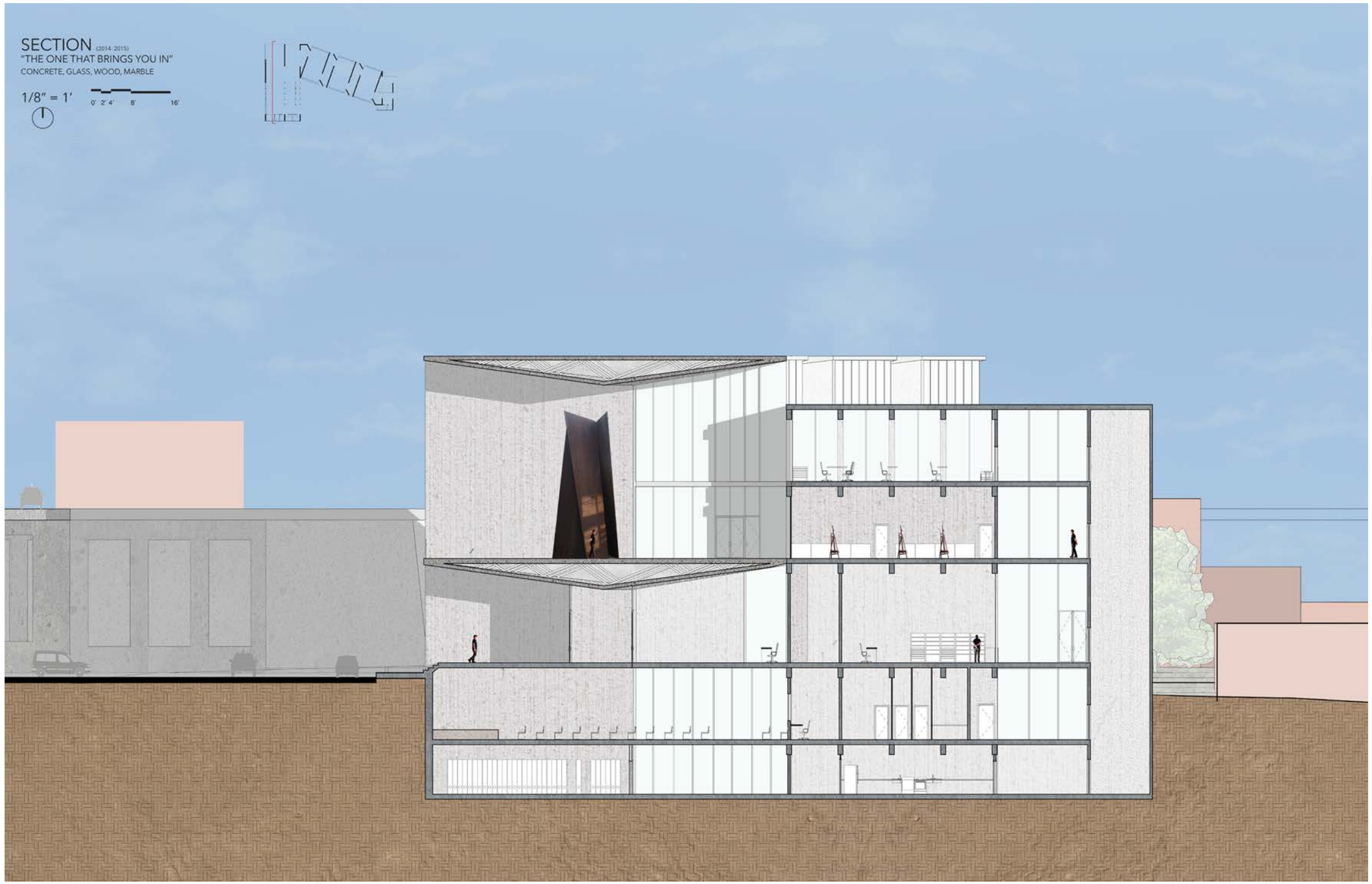
*** Louis I. Kahn, "*Silence and Light.*" (Zurich: Park Book, 2013), 26-27.

PERSPECTIVE (2014-2015)
"VIEW FROM CAR ON I-695"
CONCRETE, GLASS, WOOD, MARBLE

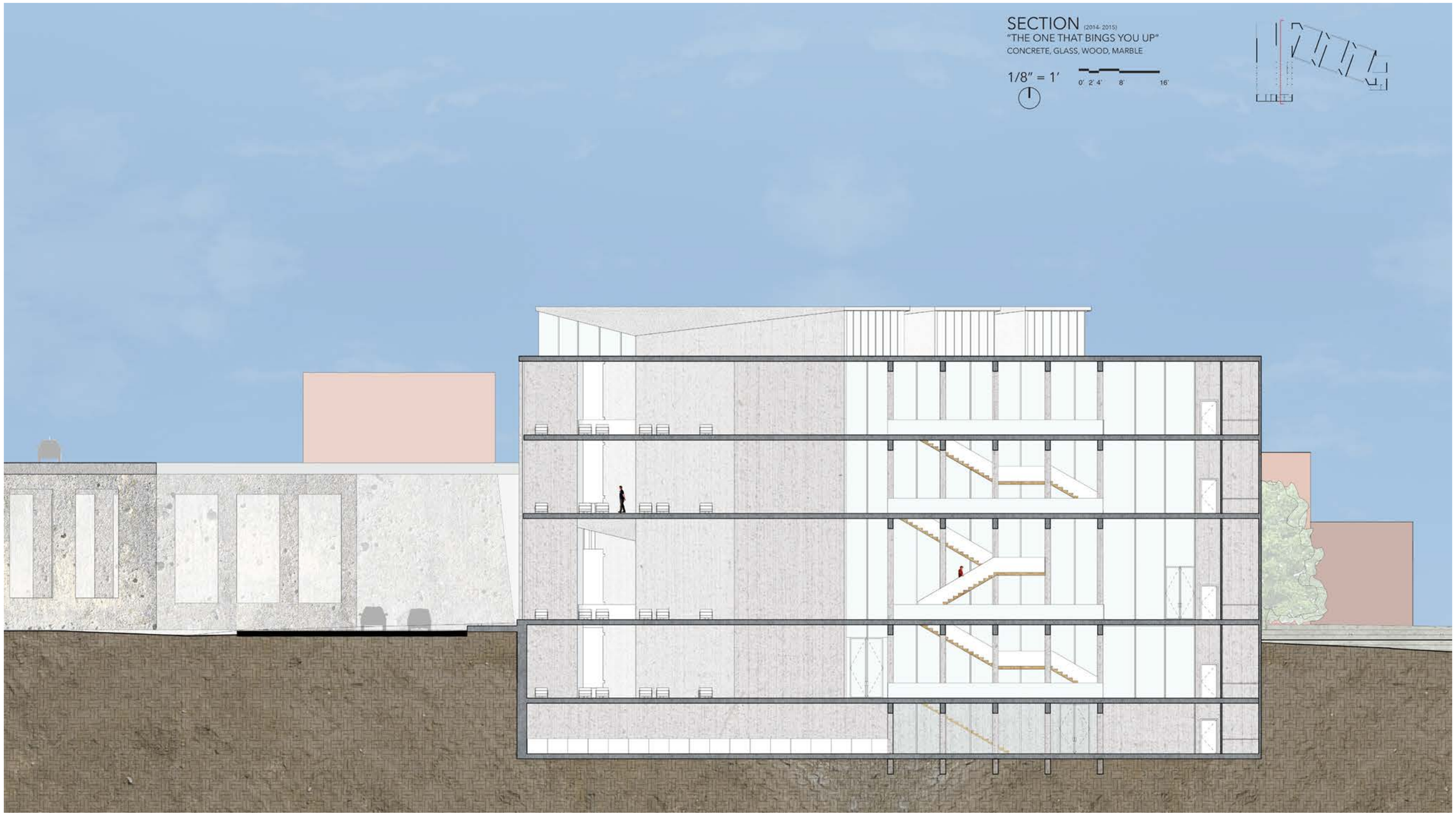


Elevation along Virginia Ave.
showing the development of the facade

The elevation shows the relationship between the highway and the scale of the neighborhood

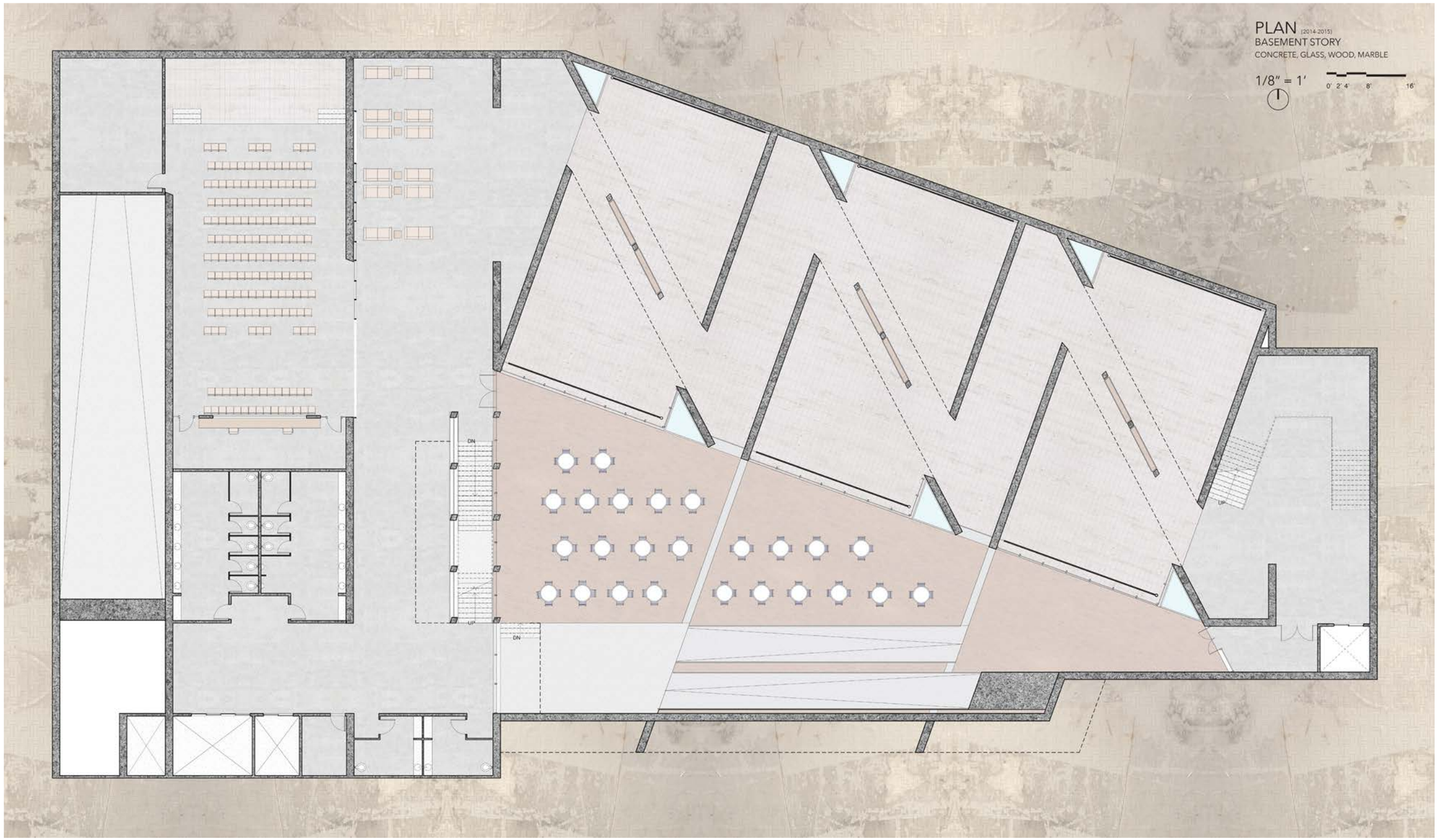


The section shows the entry sequences between the exterior street space to the interior gallery spaces.

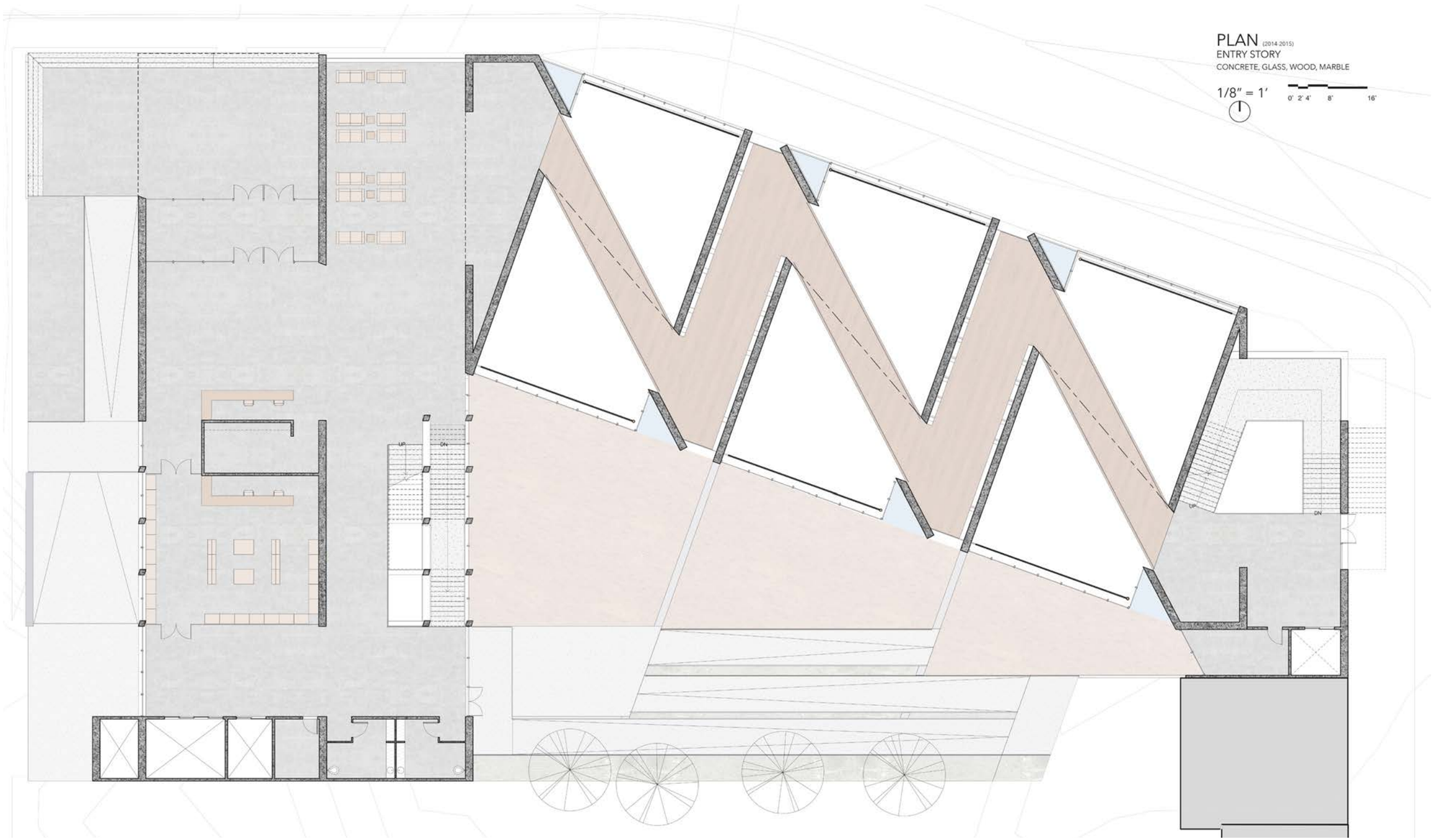


Section showing the grand staircase along the curtain wall and the area for sitting and refecting

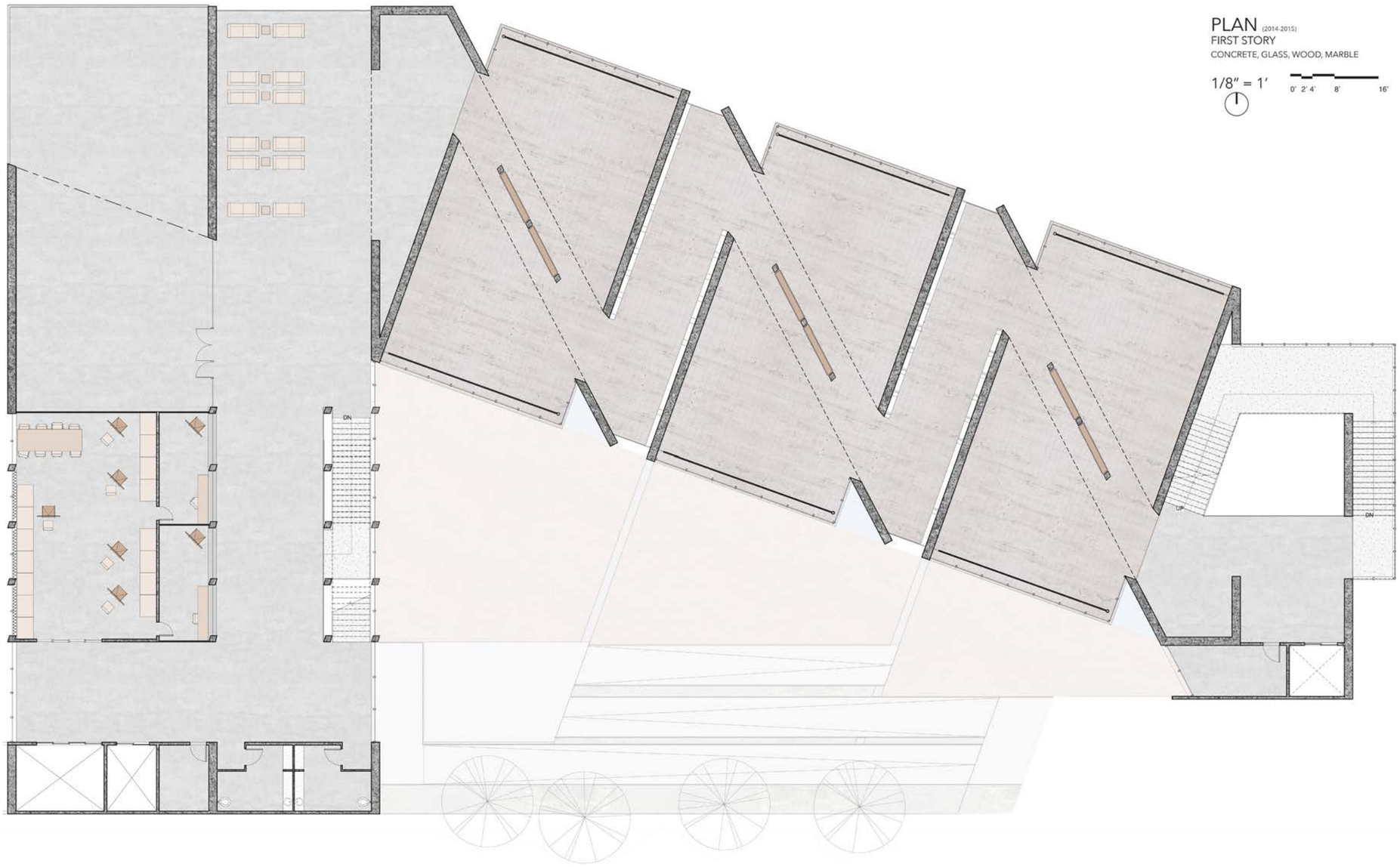
Sub-Basement Plan: loading dock, packing area, and conditions storage rooms and the bases for the reflecting walls



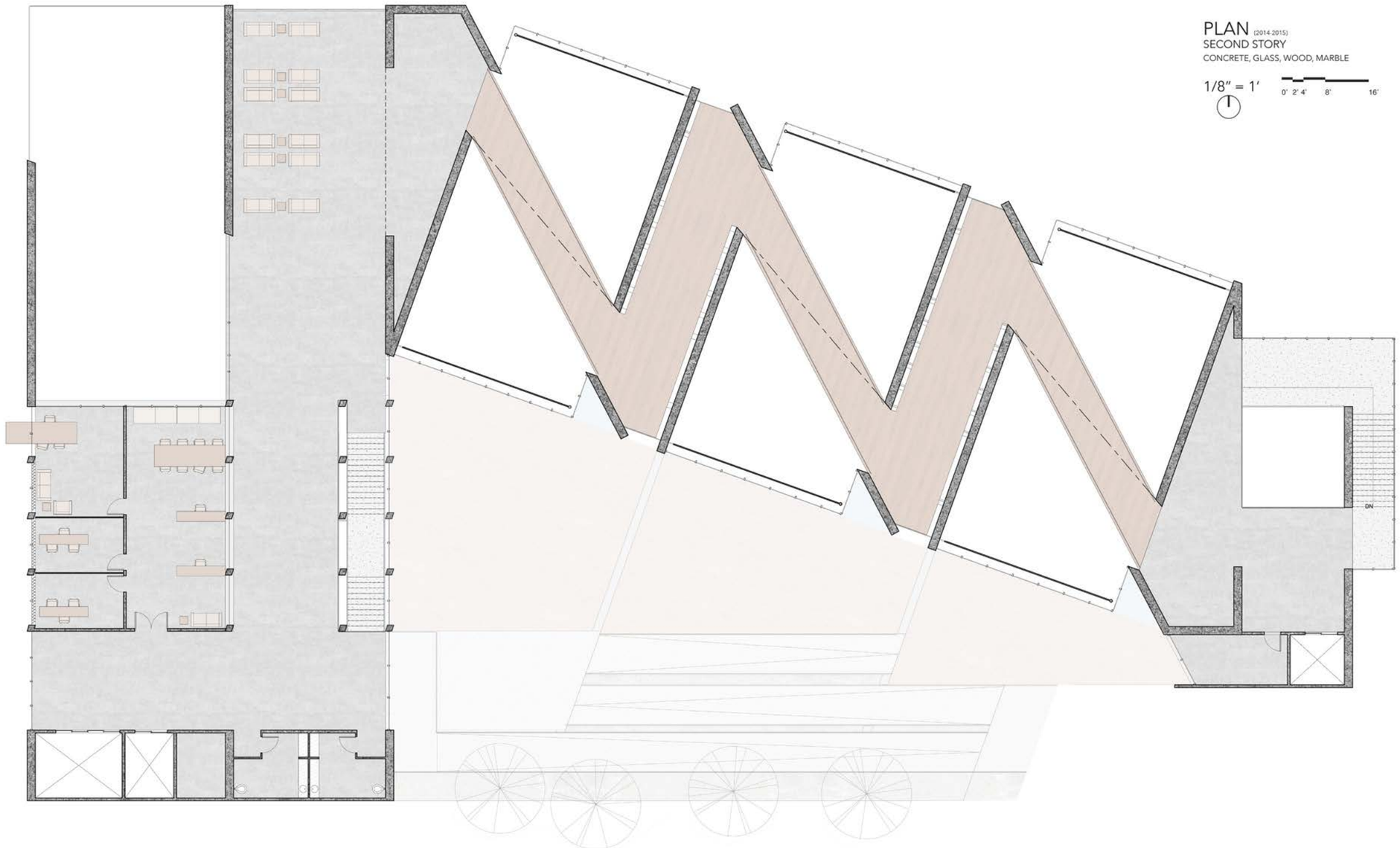
Basement Plan: multipurpose space, main gallery spaces, and sculpture garden



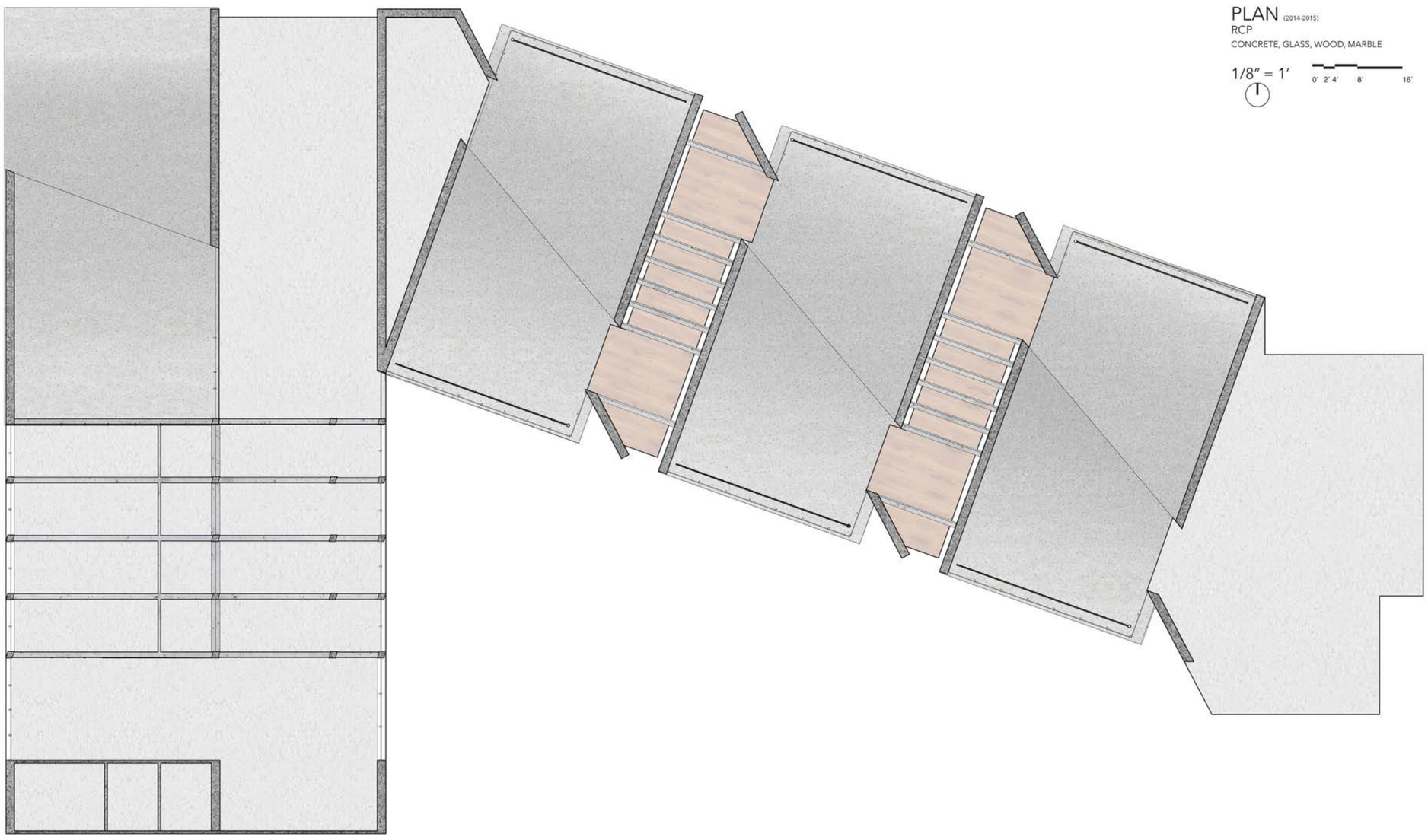
Entry plan with gift shop, and the bridges
that fly over main gallery spaces



Level one with conservation gallery,
outdoor terraces, and main galleries



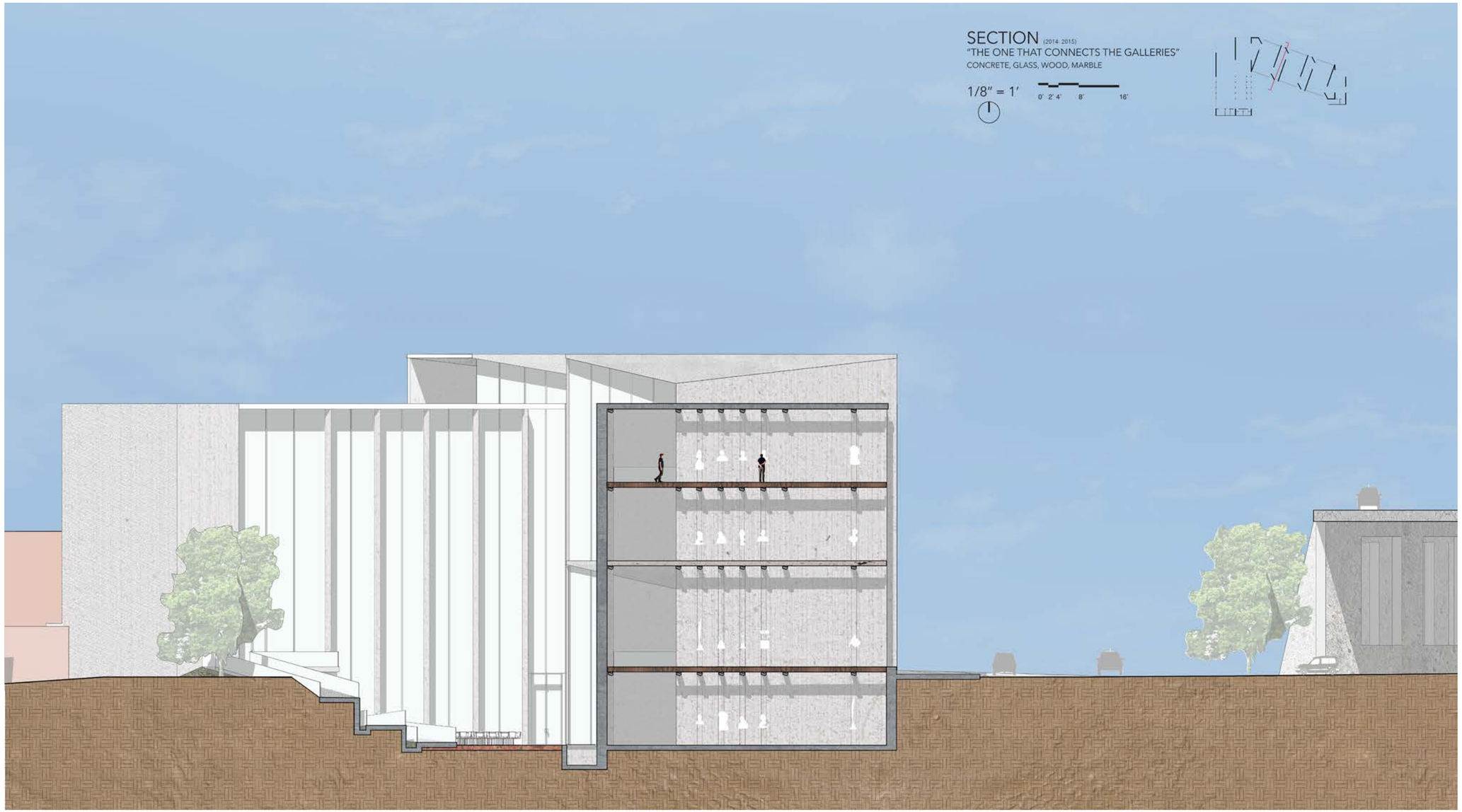
Level two showing the director's office and
the bridges that fly over main gallery spaces



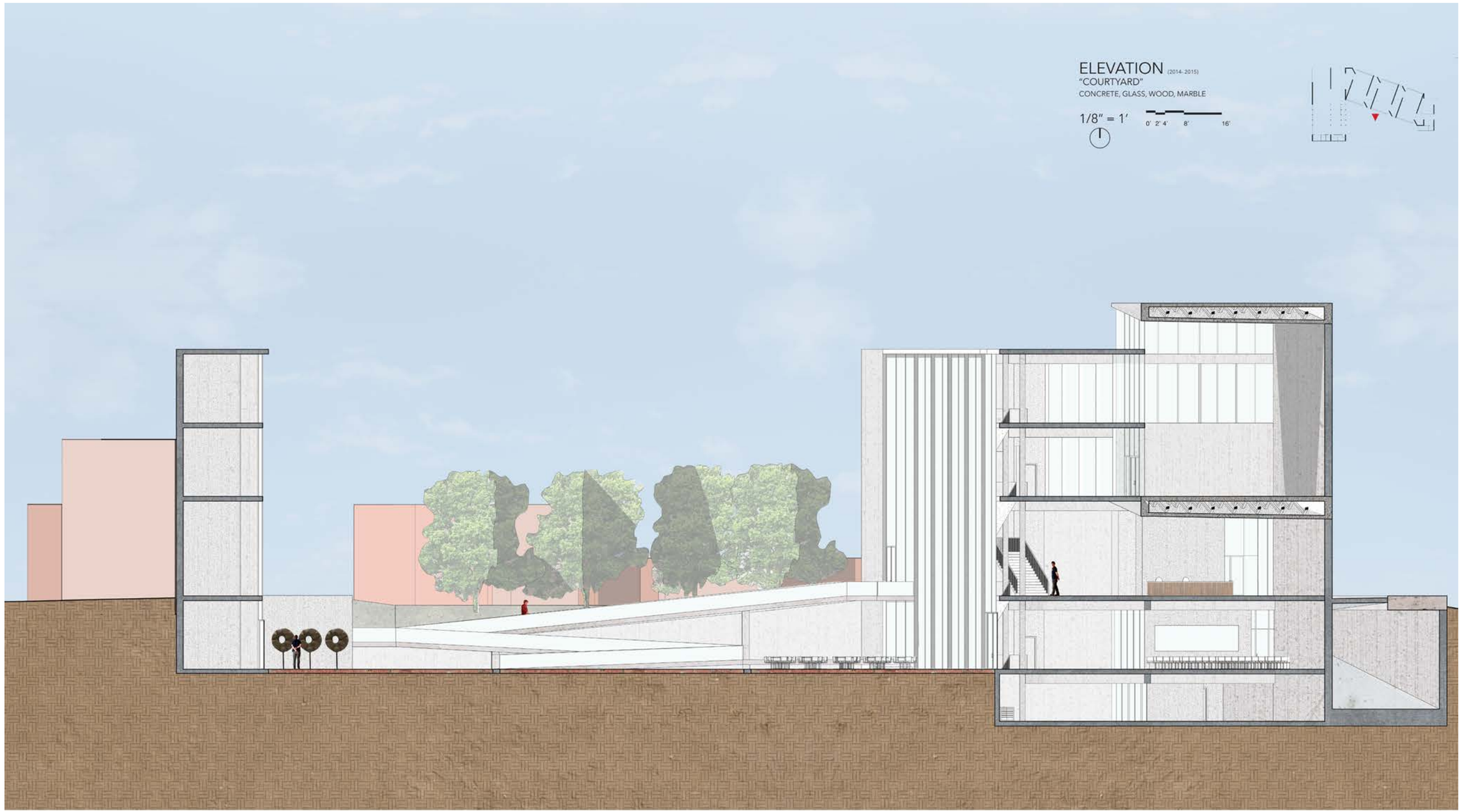
Refected Ceiling Plan of the main roof that diffuses
the light across the large concrete surfaces

Site Section along Virginia Ave.
showing the rhythm of the building

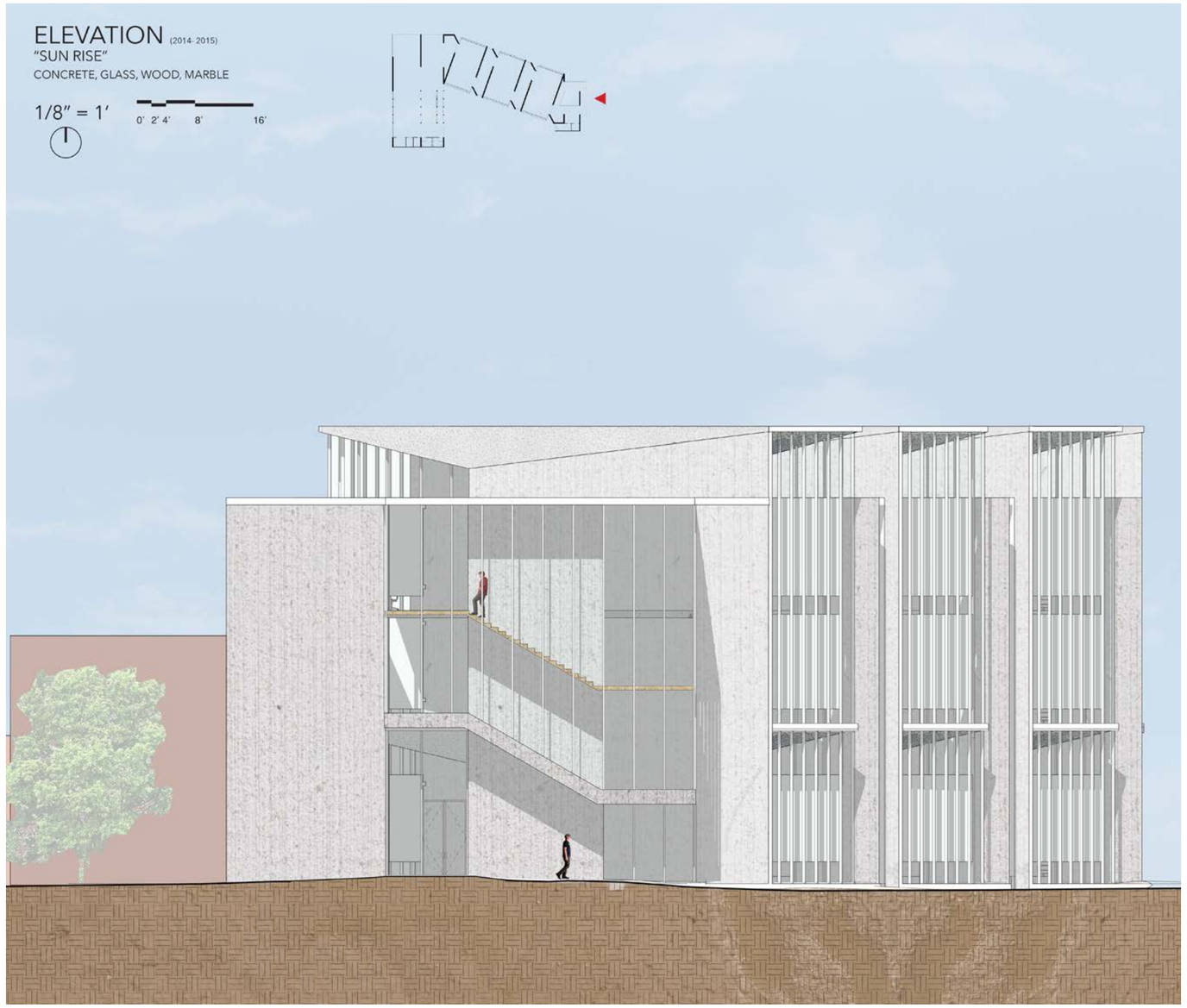
Section showing the relationship between
main gallery spaces and the bridges



Section showing the intimate gallery spaces with small scale sculptures



Elevation showing the connection points into
the sculpture garden: ramp, stairs or elevator



The elevation shows the stair becoming the joint between the levels and the connection back into the city.

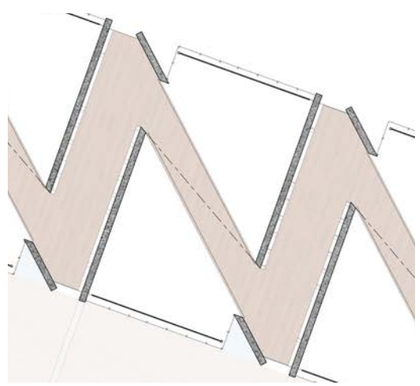
SECTION (2014- 2015)

"THE ONE THAT SHOWS THE ART"

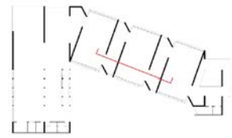
CONCRETE, GLASS, WOOD, MARBLE

1/4" = 1'

0' 1' 2' 4' 8'



This is an example of the building with the collection on display for opening day



SECTION (2014-2015)

"THE ONE THAT HOLDS THE ART"

CONCRETE, GLASS, WOOD, MARBLE

1/4" = 1'

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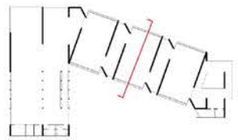

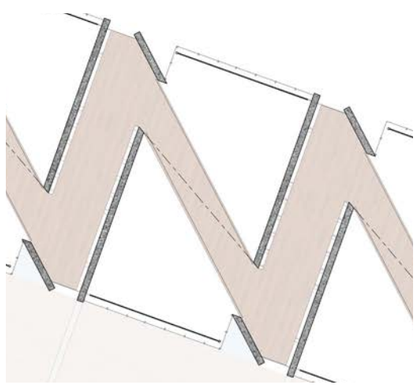

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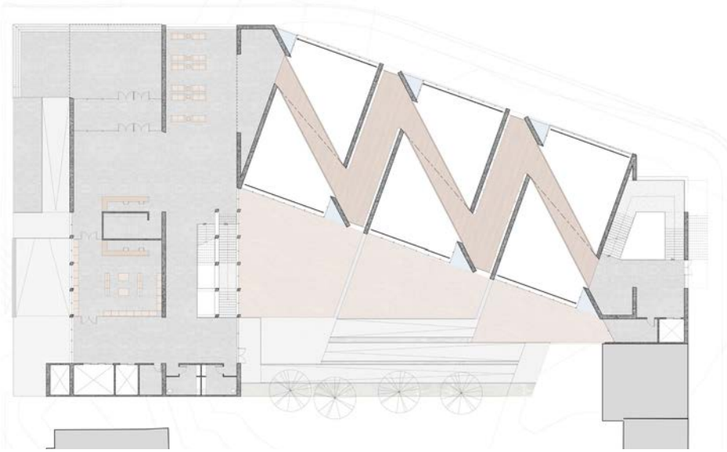
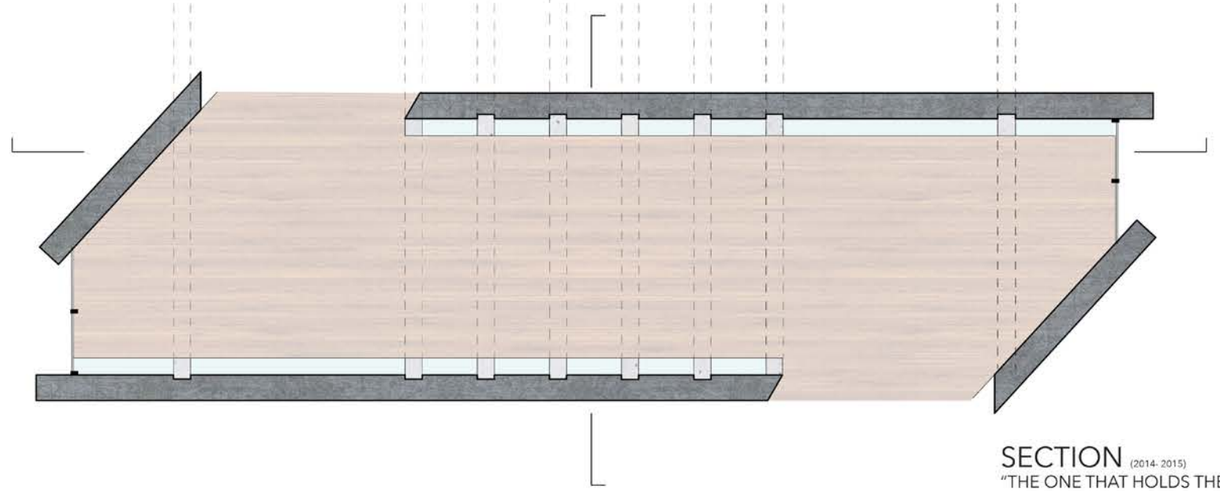
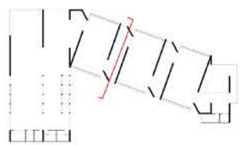




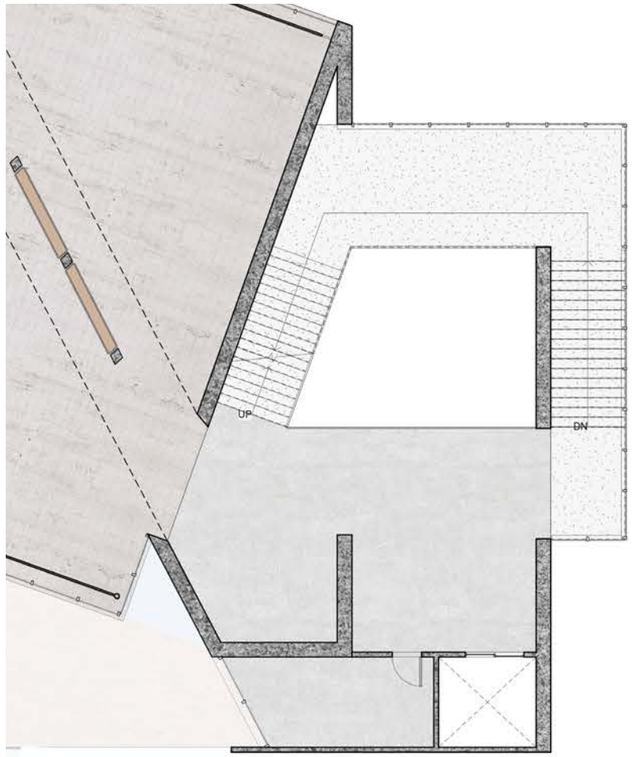
SECTION (2014-2015)
"THE ONE THAT HOLDS THE STATUES"
CONCRETE, GLASS, WOOD, MARBLE

1/4" = 1'

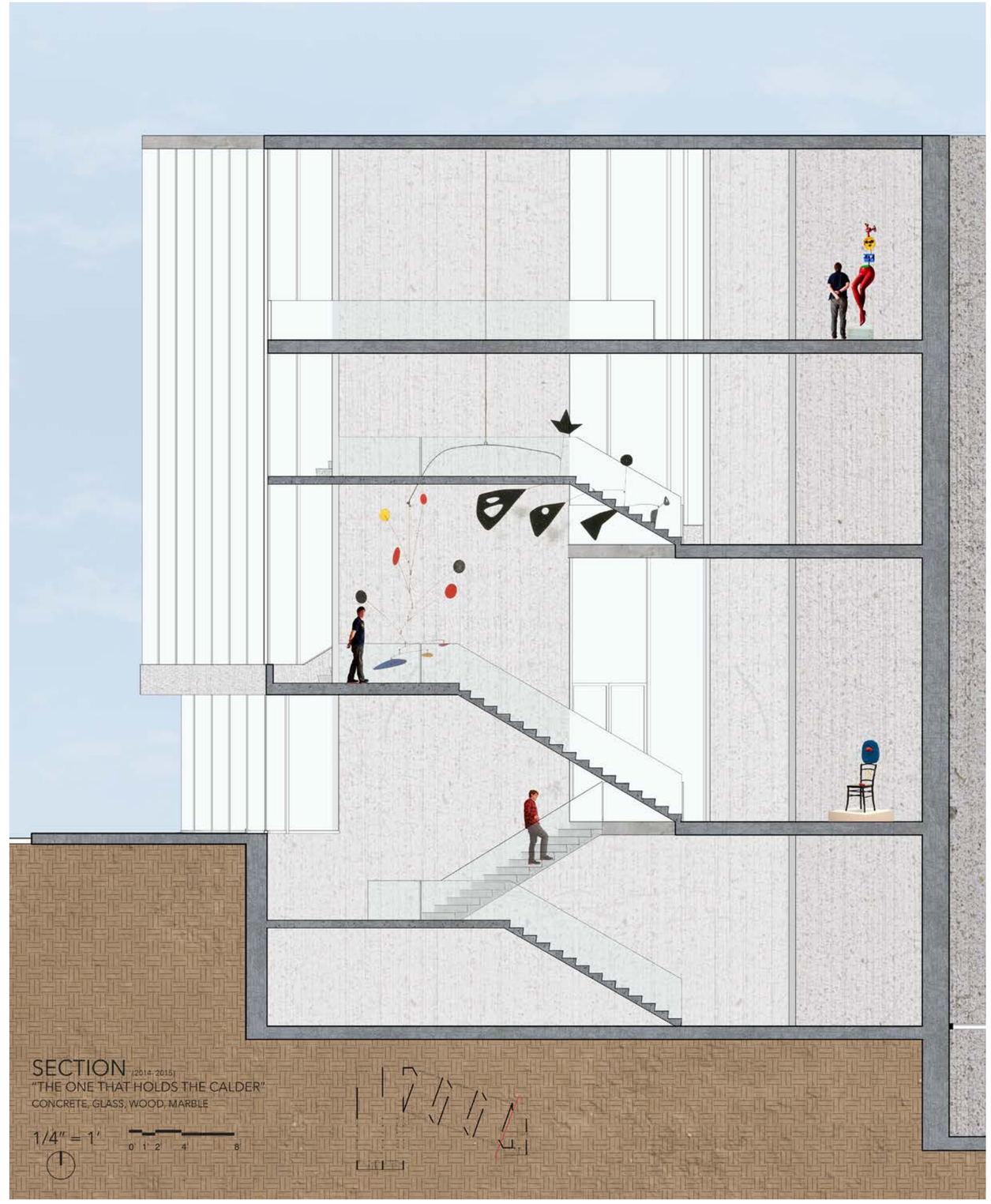
0' 1' 2' 4' 8'



This is an example of the building with the collection on display for opening day



The section shows stair becoming the joint between the levels connecting the art realm and the world outside of the gallery.



SECTION (2014- 2015)

"THE ONE THAT REFLECTS LIGHT"

CONCRETE, GLASS, WOOD, MARBLE

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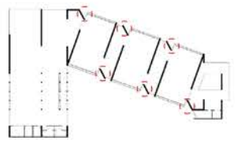
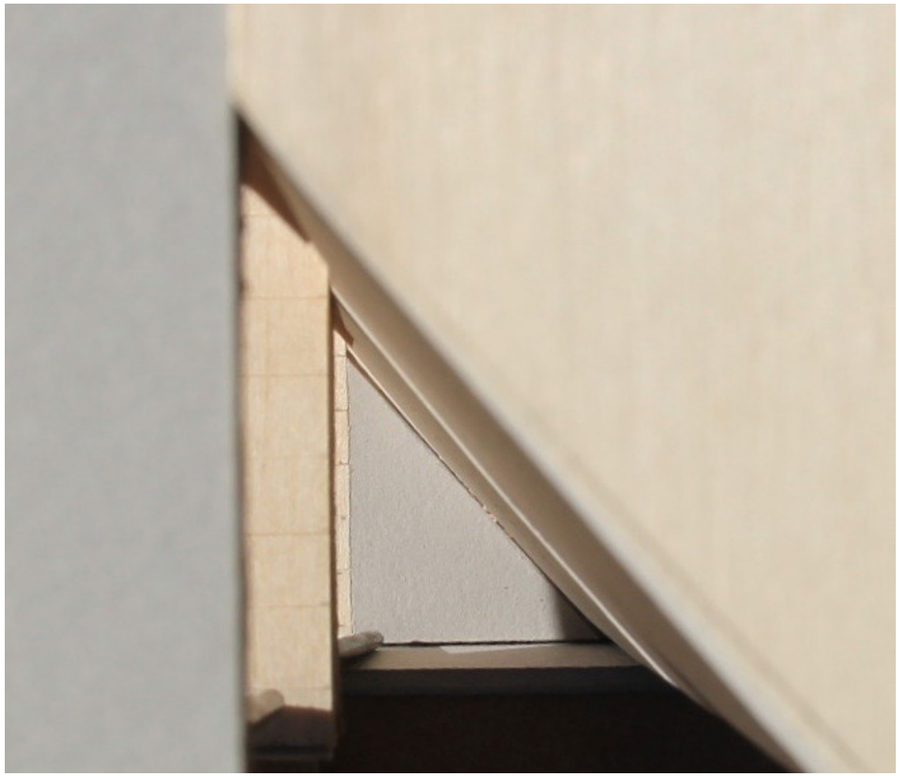
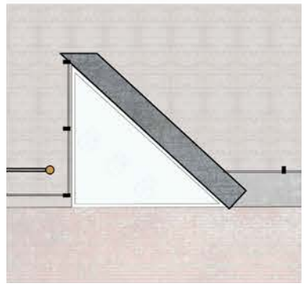
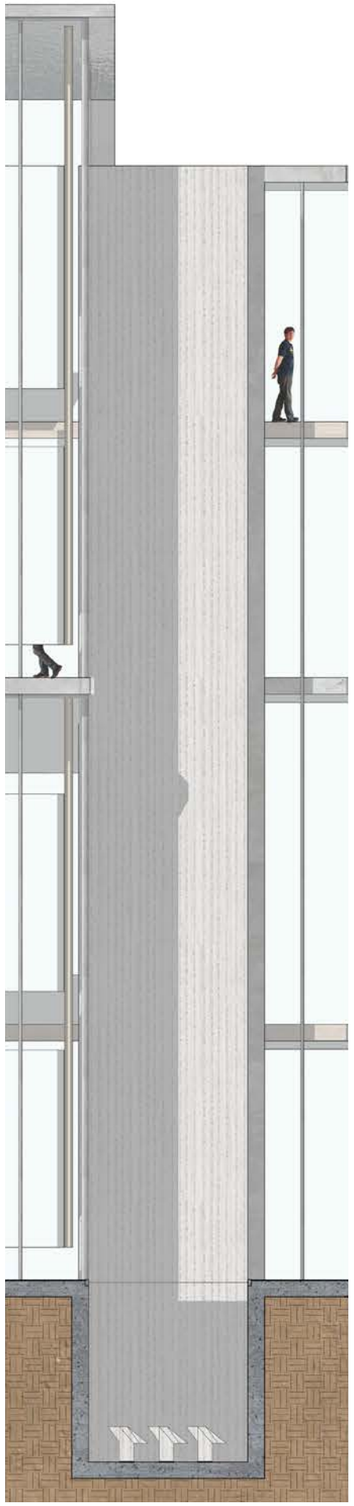
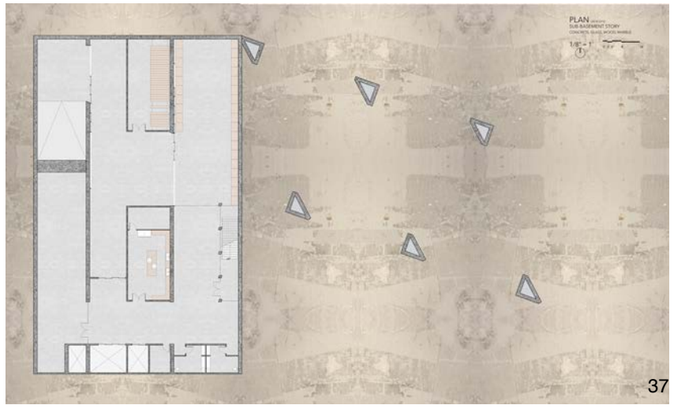




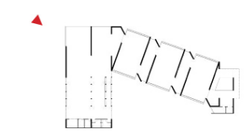


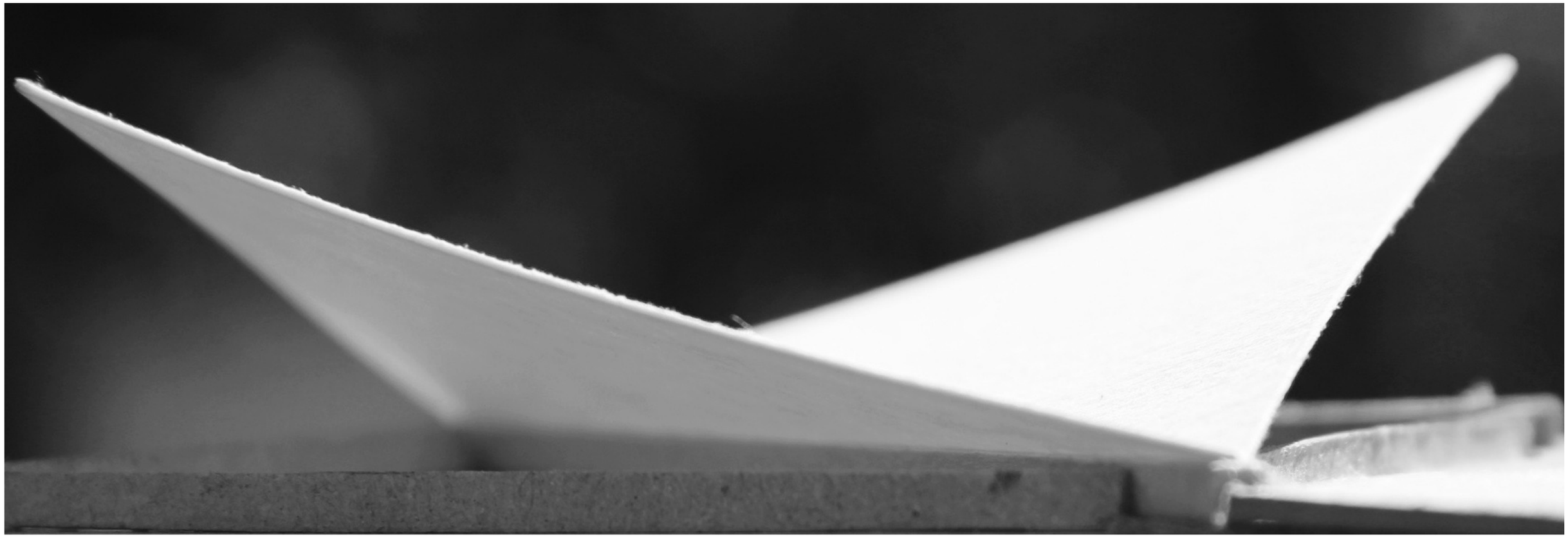




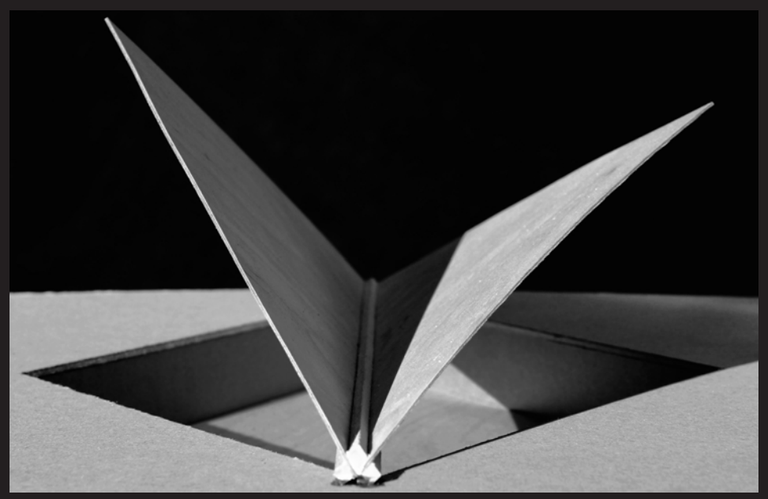
The angle wall allows light to be reflected off the wall into the main gallery spaces

PERSPECTIVE (2014- 2015)
"VIEW FROM CAR BELOW I-695"
CONCRETE, GLASS, WOOD, MARBLE



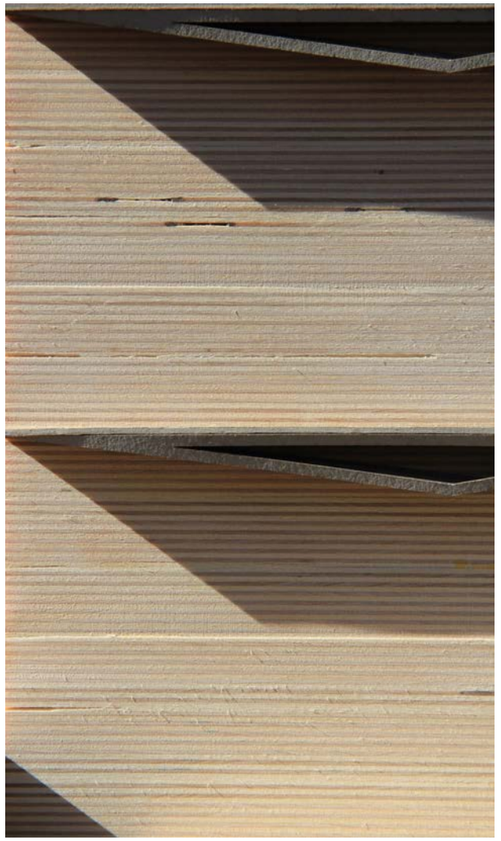


Right: Main gallery space with light entering
Left: Image of a view-corridor through the gallery



Left: Main gallery space with light entering
Right: Prototype for the roof

[BIBLIOGRAPHY]



Light/Shadow study on
Structure Model

[Abstract]

*Dailbor Vesely, "*Architecture in the Age of Divided Representation*." (Cambridge: The MIT Press, 2004), 88-89.

[Acknowledgments]

**Louis I. Kahn, "*Silence and Light*." (Zurich: Park Book, 2013), 26-27.

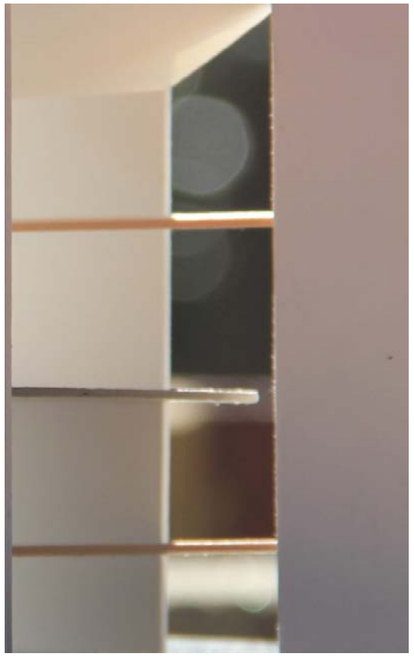
[Drawings]

***Louis I. Kahn, "*Silence and Light*." (Zurich: Park Book, 2013), 26-27.

DRAWINGS & PHOTOGRAPHS

The drawings and photographs are the work of the author.

[IMAGE CREDITS]



Main gallery space with light entering