



Undergraduate Portfolio  
BY: Garth Nicol

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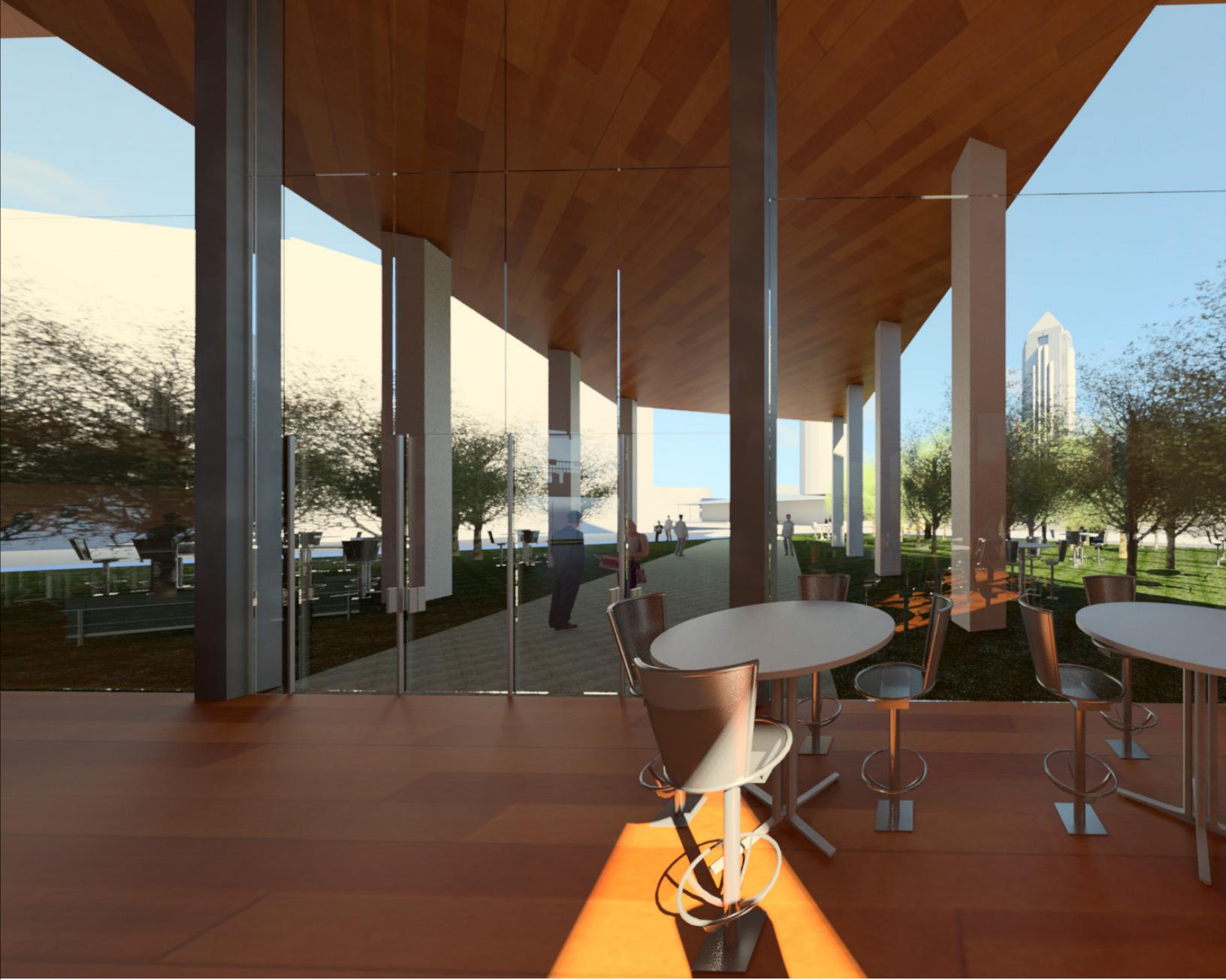
Personal Design Projects

## Studio 5, Spring 2015: Boutique Hotel, Downtown Dallas [Designed in Revit]

The design program for this studio was to design a boutique hotel in downtown Dallas on a site across from Klyde Warren Park.

The emphasis of the design of this hotel are the views the Dallas Arts District and downtown Dallas from the hotel. The design also incorporates nature into it and uses large amounts of glass in order to pull in the views of the trees and landscaping around the hotel as well as the view of Klyde Warren Park. The hotel while giving views of the city also gives of an atmosphere that makes it seem as if you're not in the city anymore. So you can explore the city life and culture and the go back to the hotel and feel like you're not in the city any more.

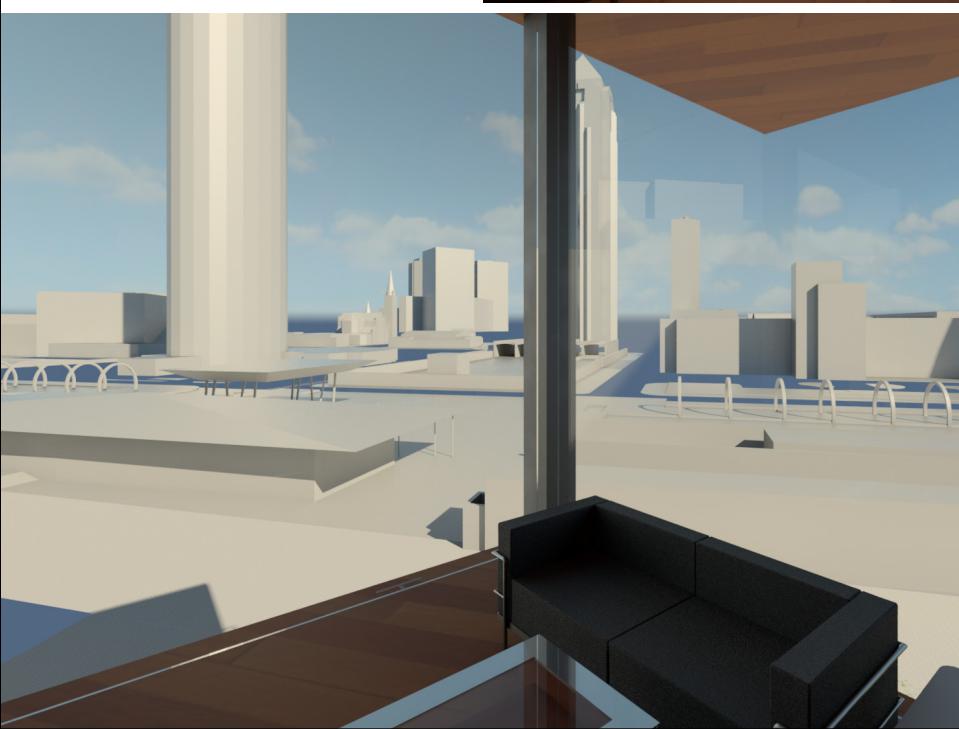




Ground Floor Pictures



Ground Floor Pictures



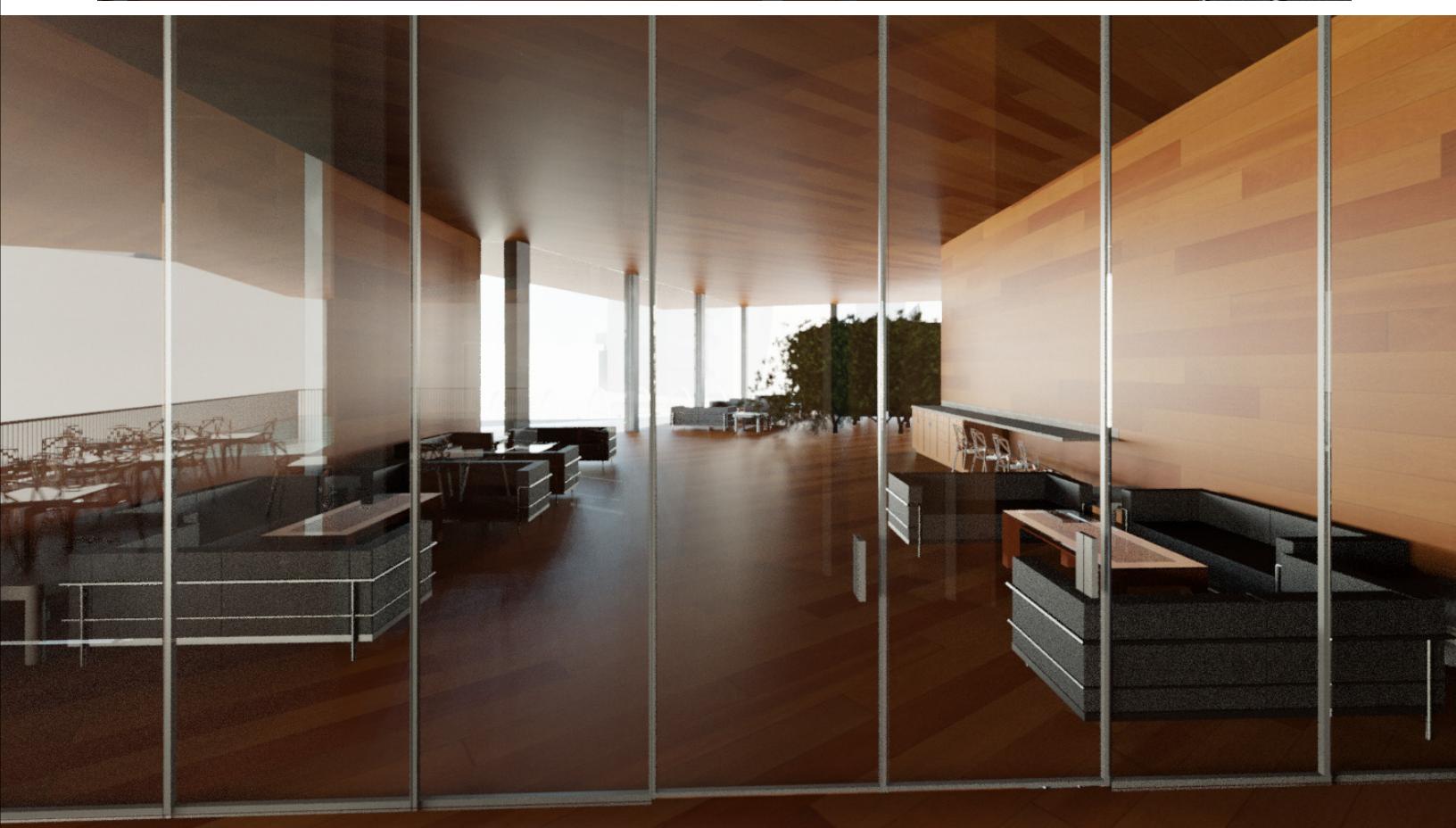
Amenities



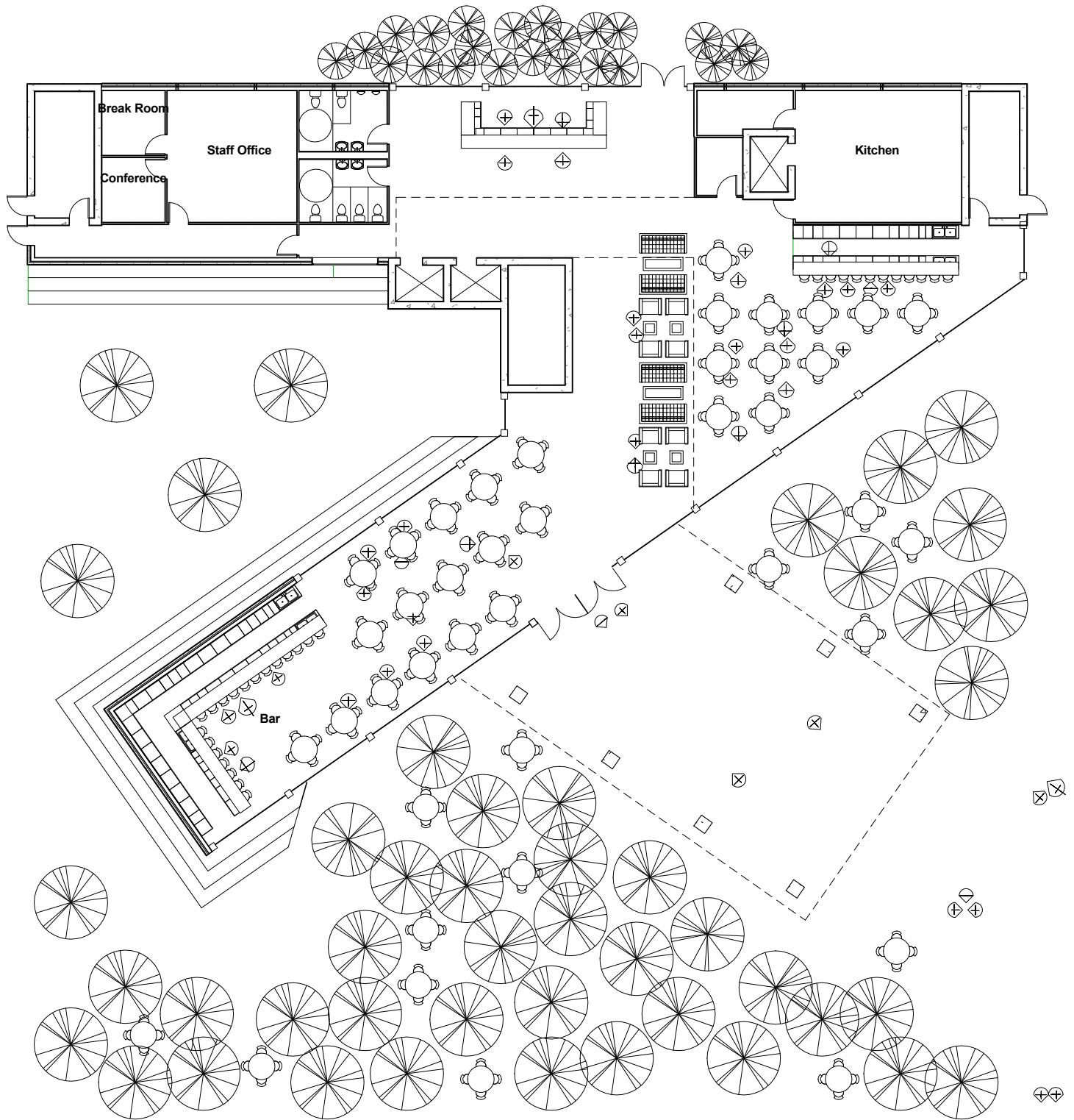
Room Pictures



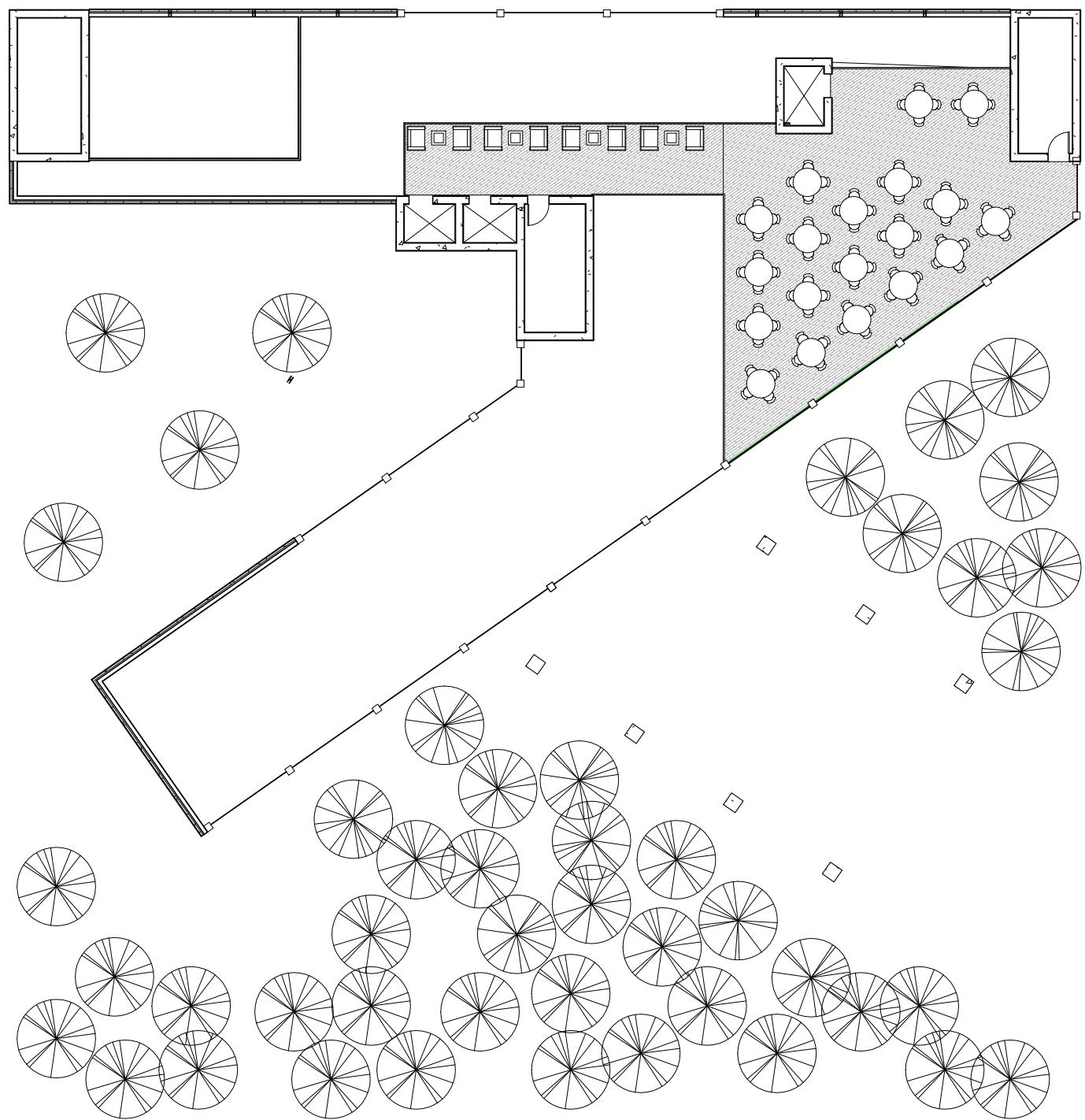
Room Pictures



Lounge Pictures



1 Ground Floor  
3/64" = 1'-0"

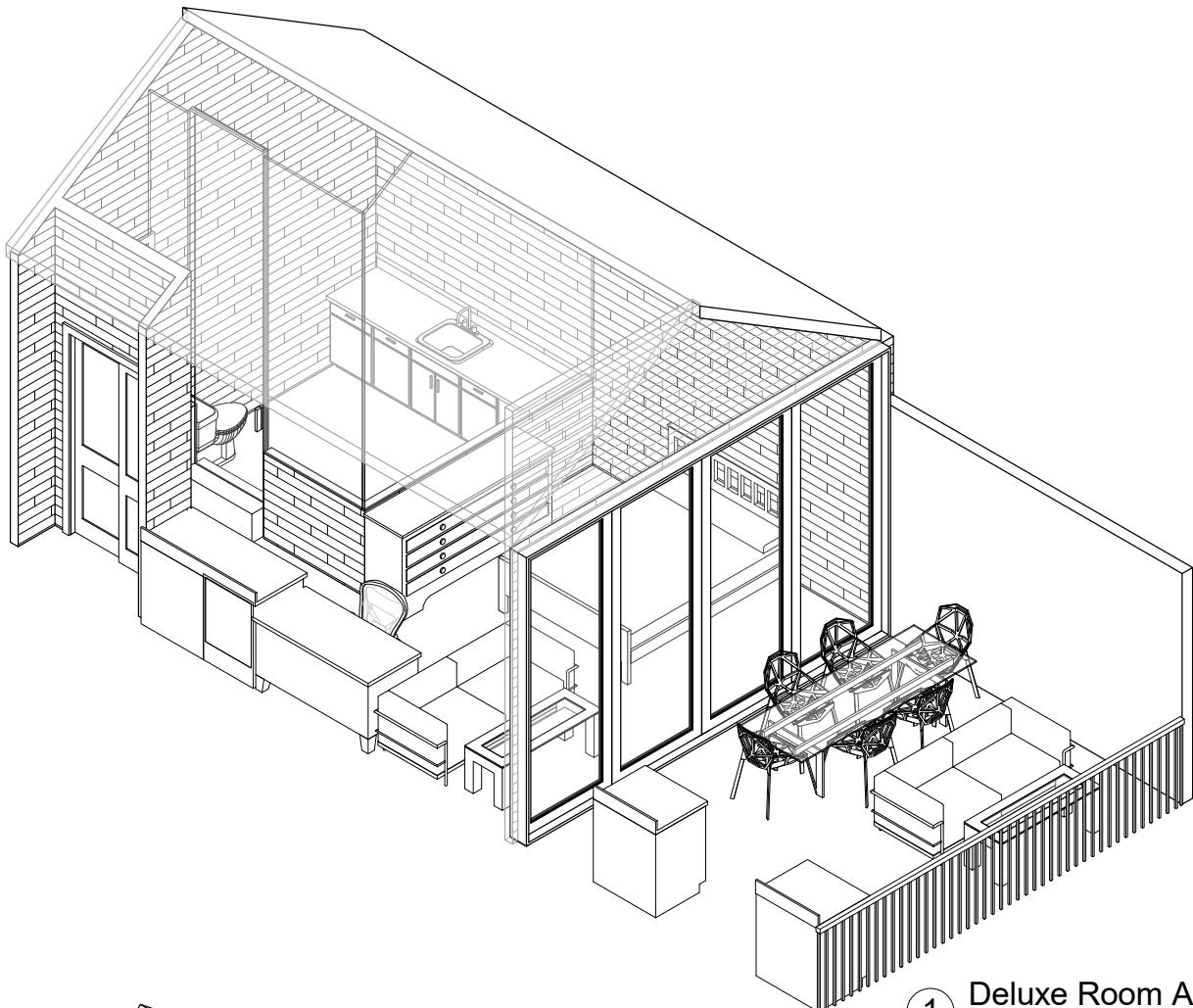


1 Mezzanine  
3/64" = 1'-0"

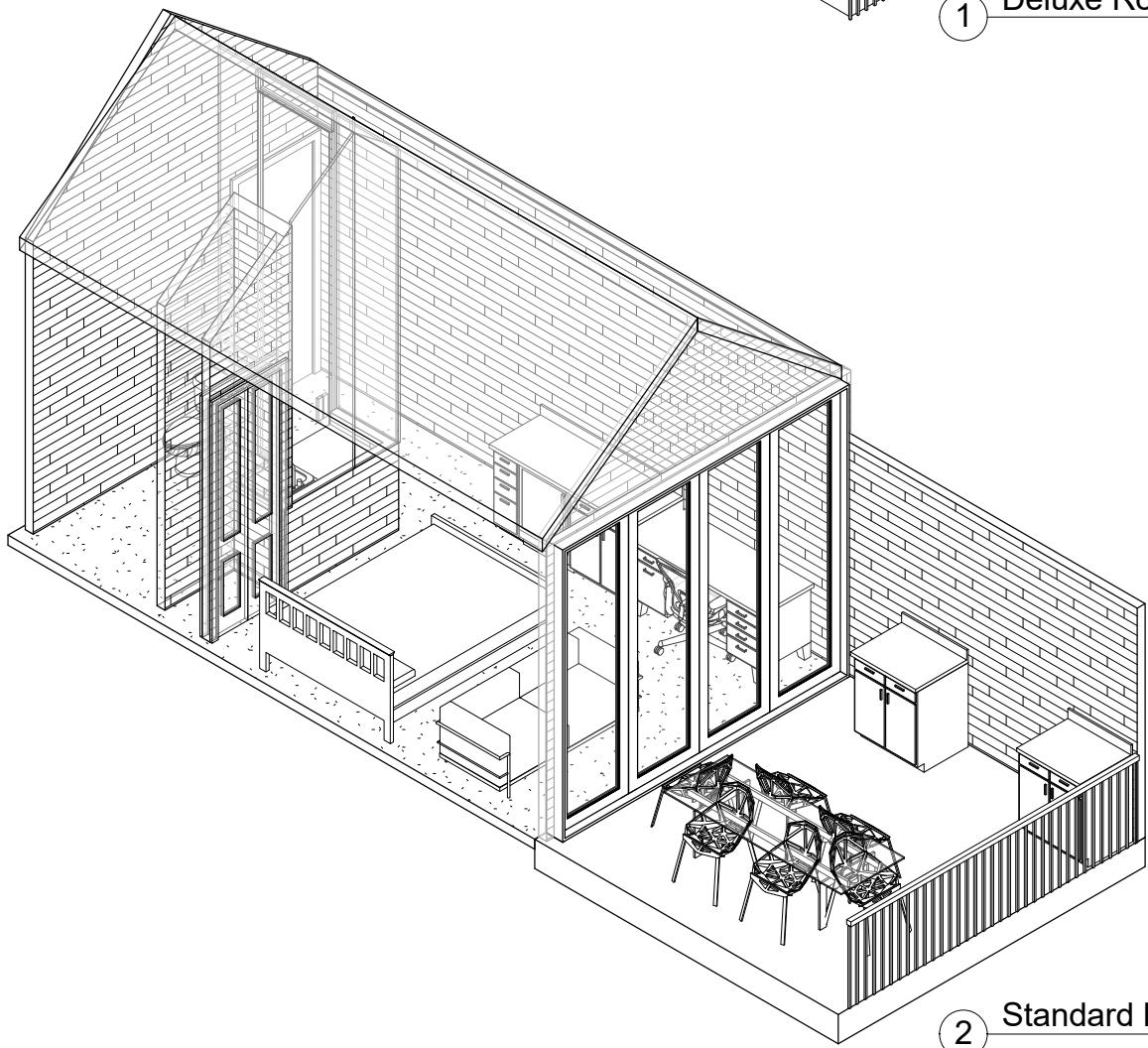


1 Level 2 & 4 Floor Plan with Structural Grid  
3/64" = 1'-0"

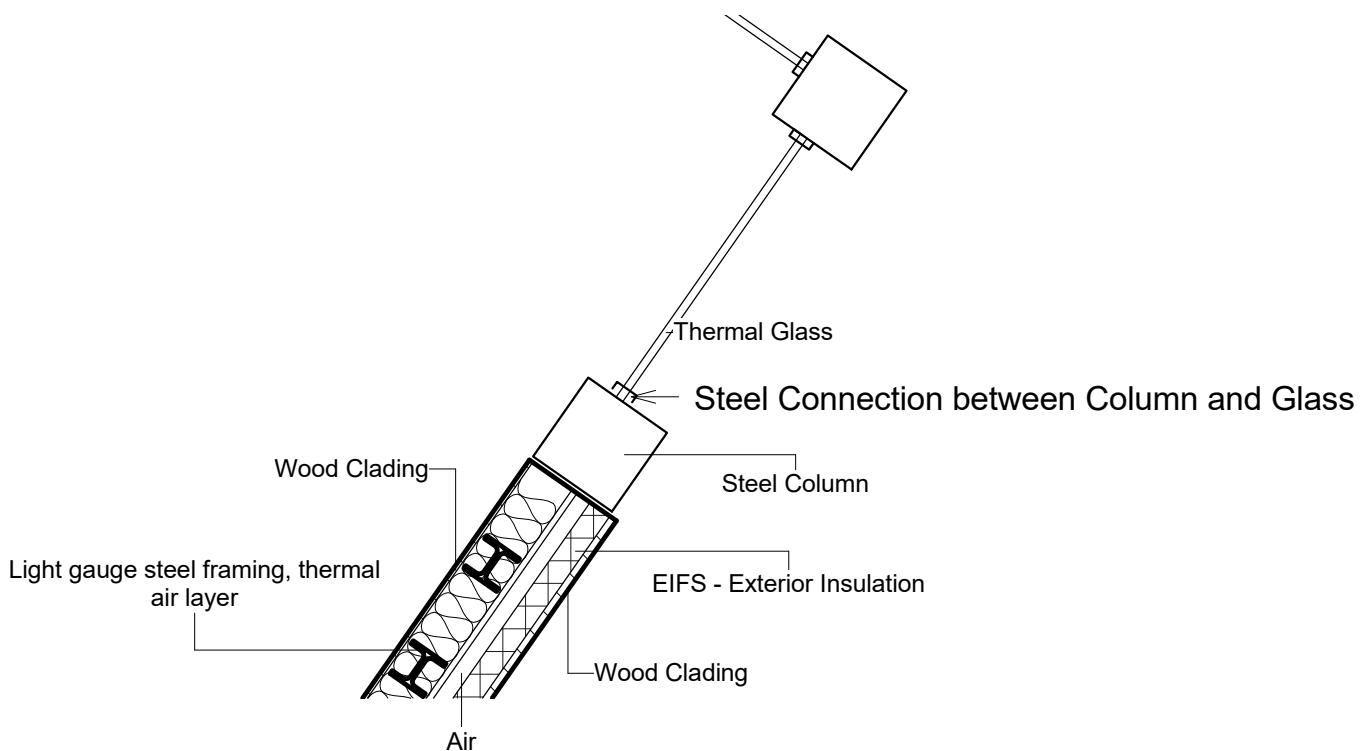




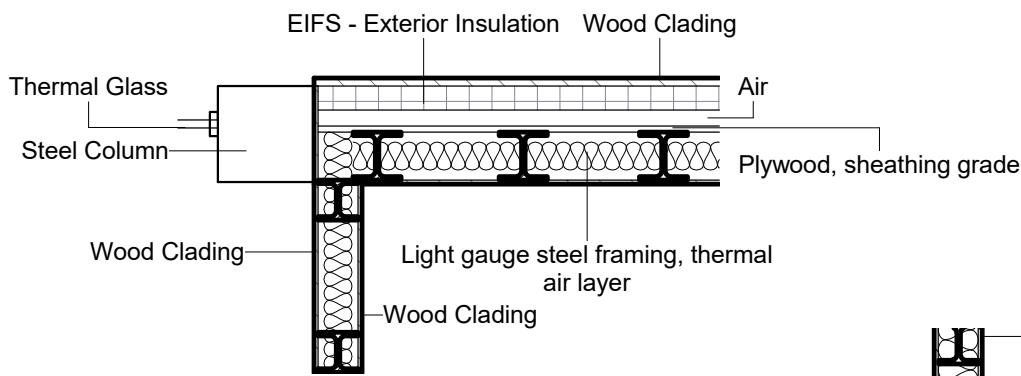
1 Deluxe Room Axo



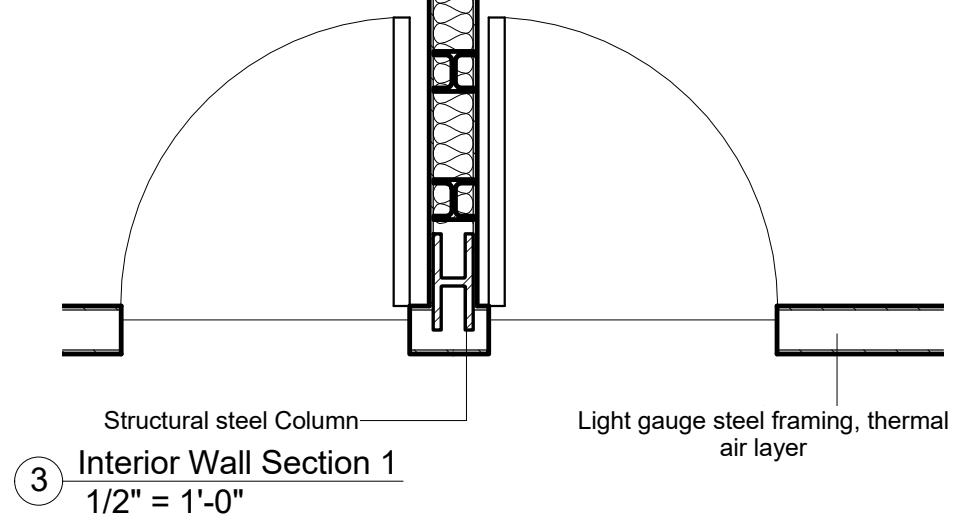
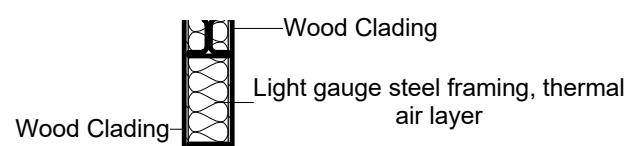
2 Standard Room Axo



1 Exterior Wall Section 1  
1/2" = 1'-0"



2 Exterior Curtian Wall Detail  
1/2" = 1'-0"



# Spain Study Abroad Studio, Urban Plaza [Designed using Rhino]

The design project was to design a multi-use urban plaza to renovate an existing urban plaza to revitalize the neighborhood.

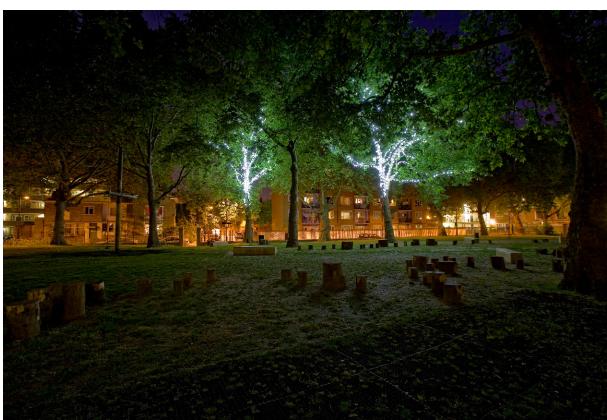
## Plaza Pumarejo Narrative

The idea behind the redesign of Plaza Pumarejo is to take the current plaza which as it is laid out greatly limits its use and to redesign it to increase its functionality. The plaza needs to have its functionality increased so that the residents around the area can increase their use of and enjoyment of the plaza. The economy of the surrounding area will also increase with the redesign of the plaza and it will also become a safer place since the drunks and drug users won't have the anonymity that they have now which is why they stay there currently.

The focus of the redesign is the idea of having a place to go and socializes with friends and family while enjoying a semi escape from the reality of the city. To achieve this vegetation as been employed in order to achieve a feeling that you are in a space different than the everyday city. The trees are employed as shading but they also give the feeling of serenity to the space. The trees also respond to the global need of creating more fresh air in cities by clean the dirty air through vegetation. The vines and flowers on top of the arbor also help achieve this. The fountain that is the focal point help recall the majesty that the Pumajero Palace as it once was. The mosaic tiling call attention to the great use of tile in Spain and the glass on the kiosk can be used as a surface to project advertisement or information onto when needed. Change in surface material from the street to the plaza shows the conflict between the need for vehicle traffic and space for people to socialize. At the same time thought because they are at similar height level it shows the connectivity that takes place in all activities in an urban environment and how none are truly independent of the others. Overall the plaza acts as a place where people can go to escape their troubles for a little bit and to socializes with friends and family.



## Precedents



## Plaza Pumarejo Now



## Issues with Current Plaza

Resurface the ground creating a uniform looking surface creating a feel of continuation across the plaza.

Make sure the former street is truly closed off so that it can become part of the plaza.

Remove the benches as they only create an unnecessary barrier to the plaza making it feel small and cramped and also making it smaller than it needs to be.

## Solutions of Plaza Redesign

Public Seating is now around a fountain under a tree providing a nice shaded place to sit while

The placement of the fountain and seating does not cause the plaza feel smaller than it is like the previous placement of the benches did.

The plaza has been resurfaced into a single level.

Advertisements projected on to glass.

## Plaza Pumarejo Redesigned



## Plaza Pumarejo Now



## Issues with Current Plaza

No Kiosk in Plaza.

Make the bollards line up so that the plaza has a uniform edge.

Don't let scooters park on plaza.

## Solutions of Plaza Redesign

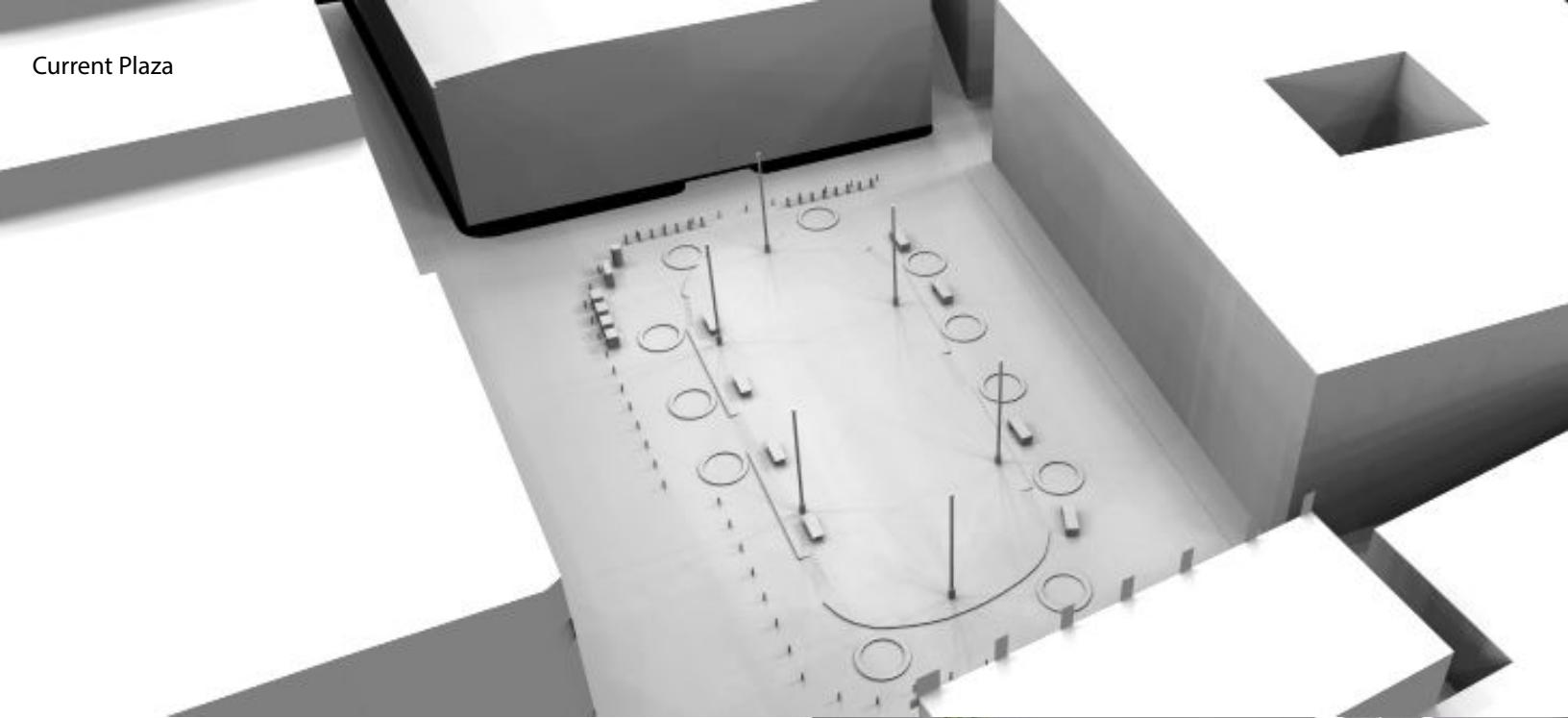
New Kiosk designed with two tiled mosaic sides that recall the historical use of tile in Spain.

Renewed night life do to plaza having more interesting light such as underwater lights in fountain and lights under trees.

## Plaza Pumarejo Redesigned



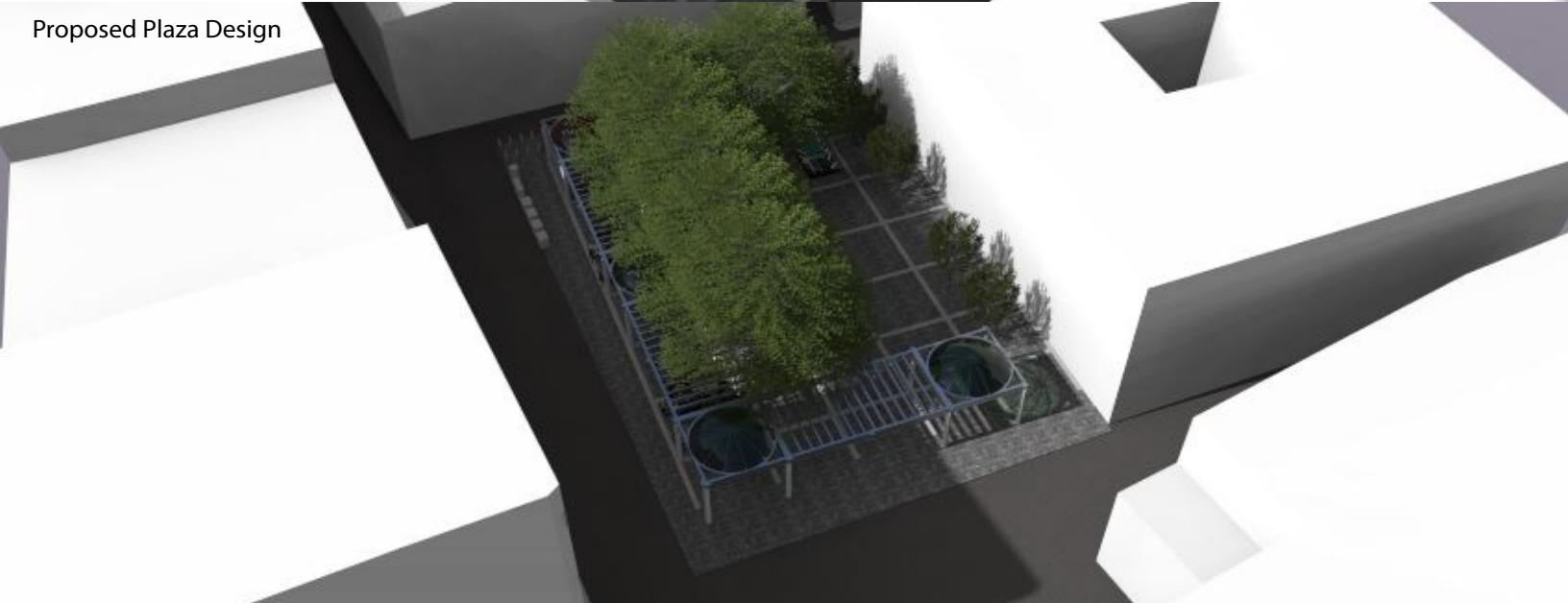
Current Plaza



Proposed Plaza Design



Proposed Plaza Design





The row of smaller orange trees provide shading as well as well as call to the culture context of the use of orange trees around Seville and demarcate the important façade of the Pumarejo Palace of the east side of the plaza.

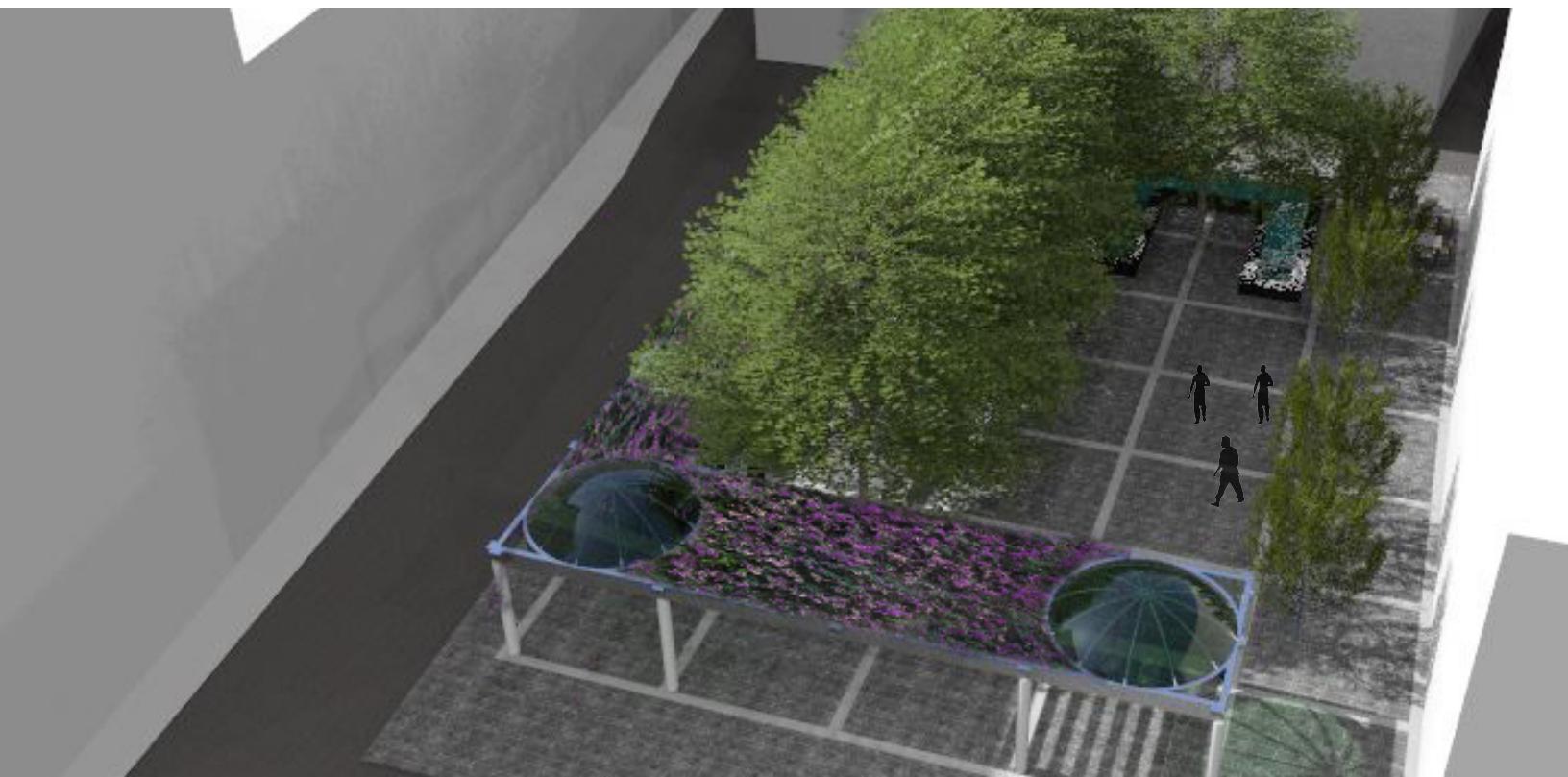
Plaza can be used as an open multiuse space including allowing the use of tents for markets.

The domes signify important entrances and axis in the plaza and are cover by colored glass.

Shade provided by row of trees.

Shade for restaurant seating area provided by arbor covered in flowering vines, which also add to the greenery and color of the plaza.

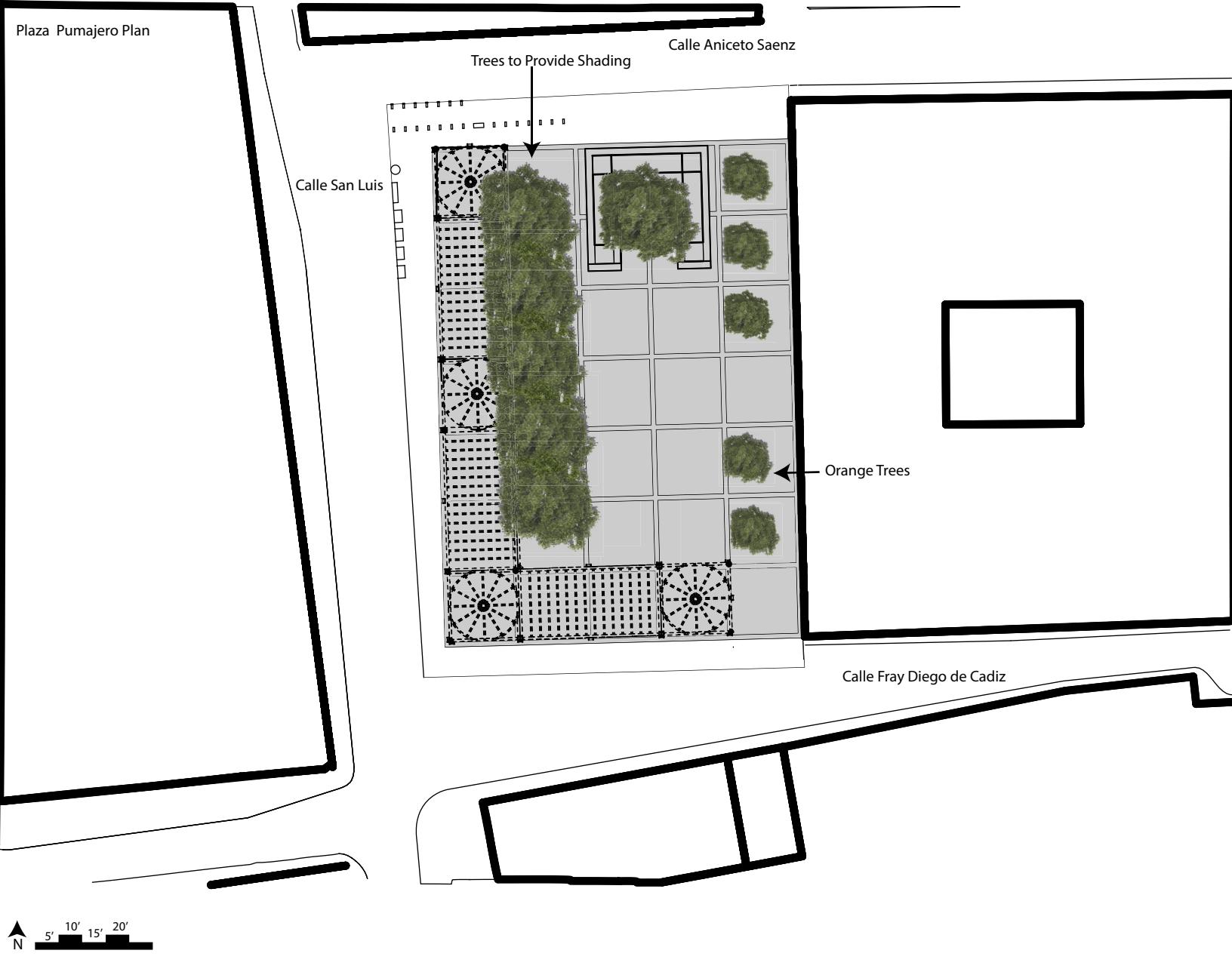
The grid on the ground shows of the organizing feature of the plaza and can even be used to divide up spaces into different events if called for.

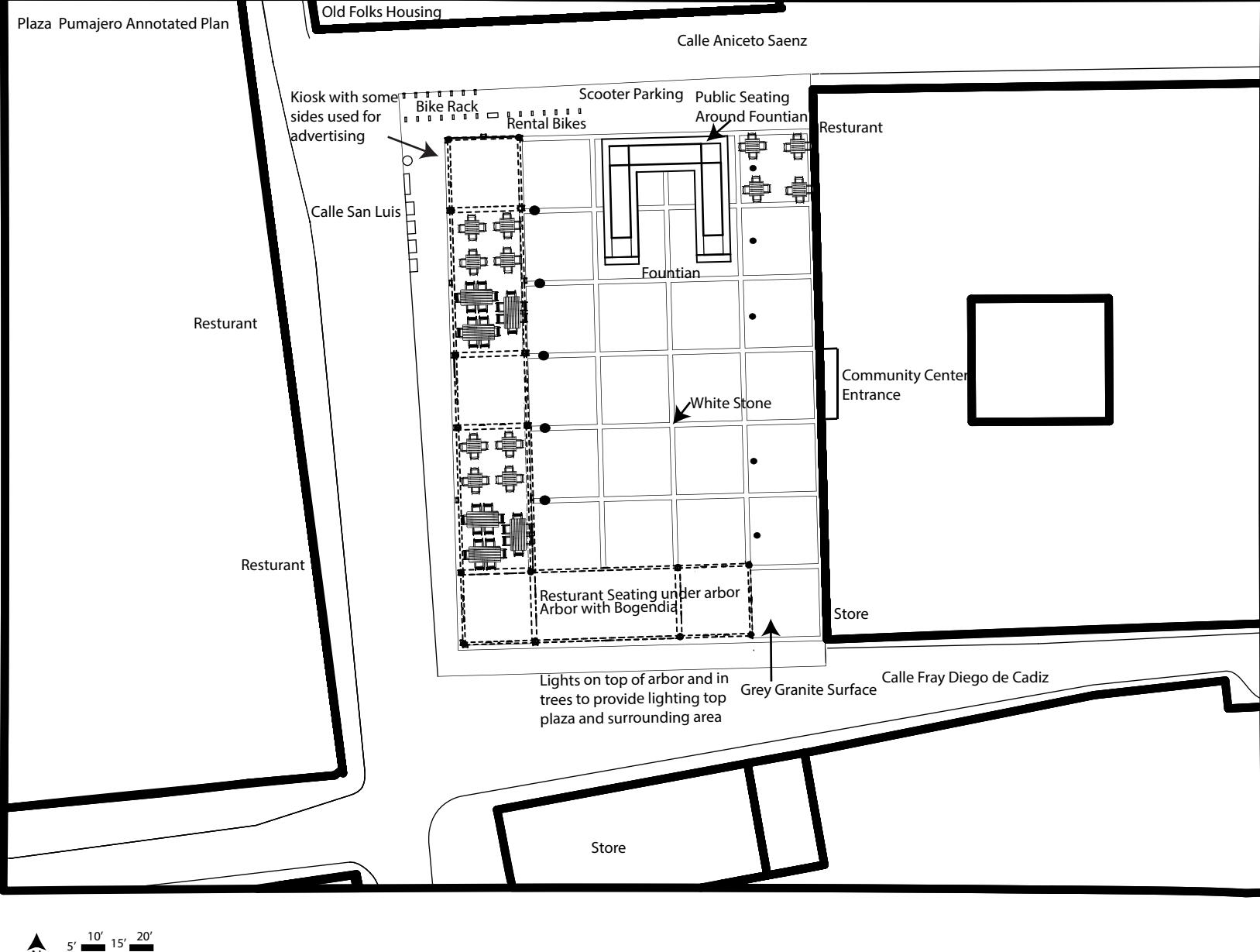


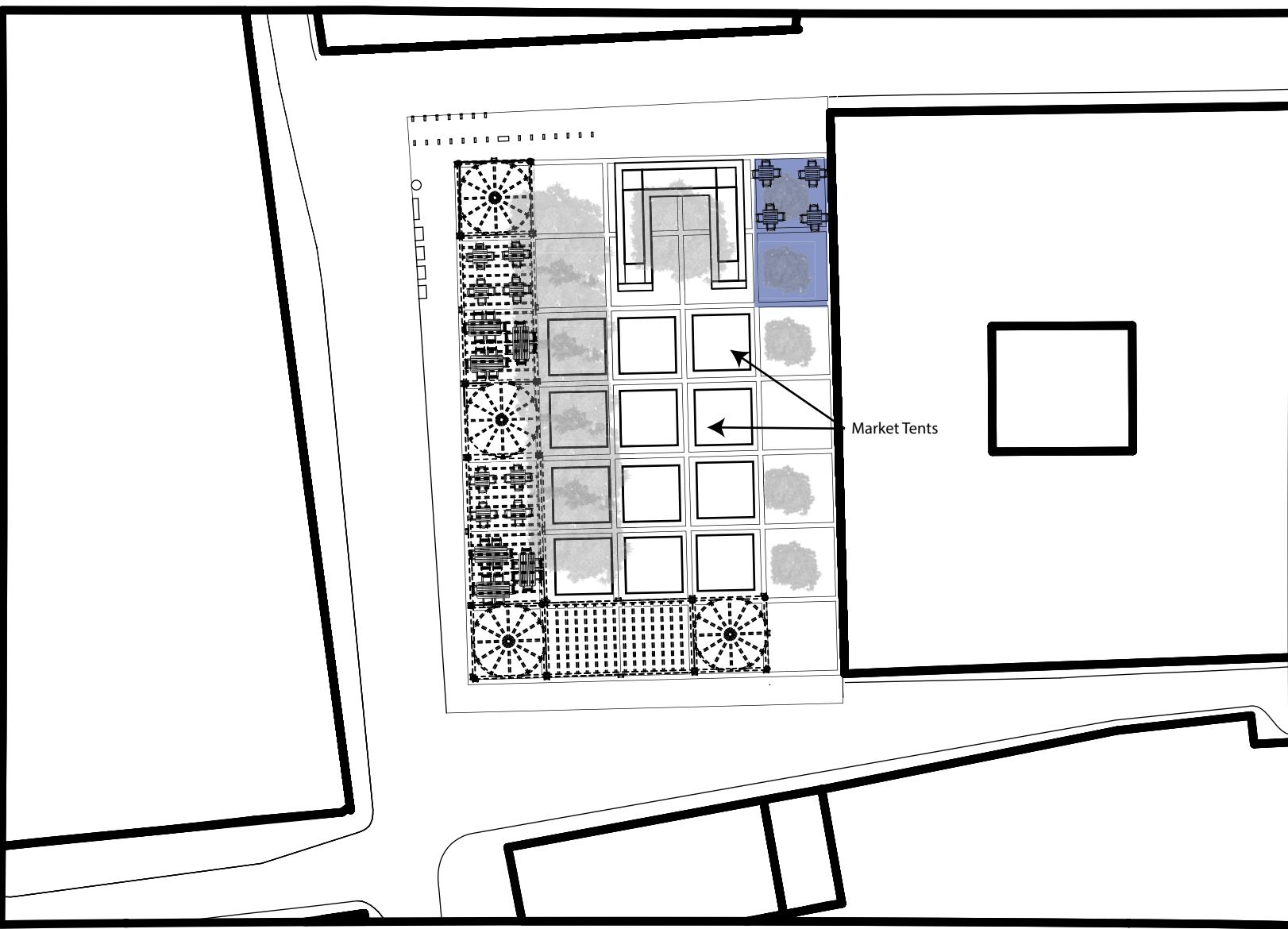




Plaza Pumajero Plan

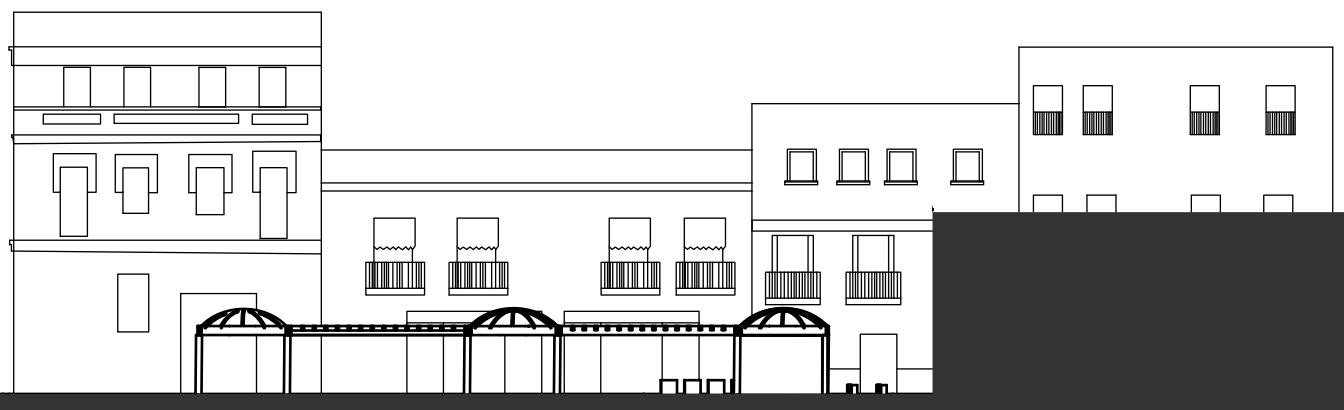




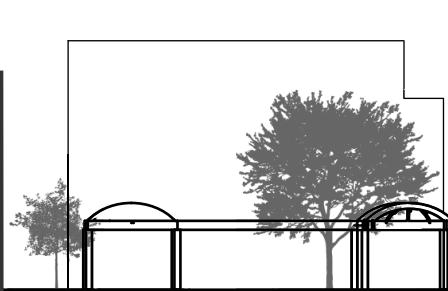




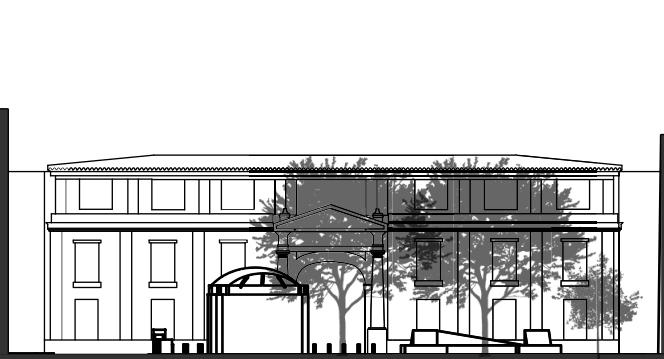
East



West



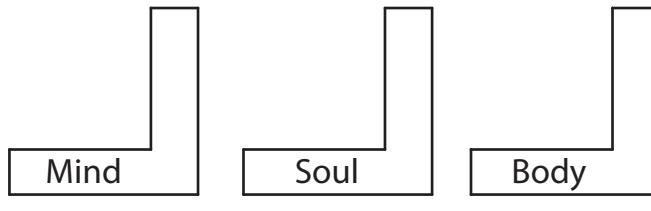
South



North  
Scale 1/32"=1'

# Retreat: Revelstoke, B.C. Canada

Mind  
Body  
Soul



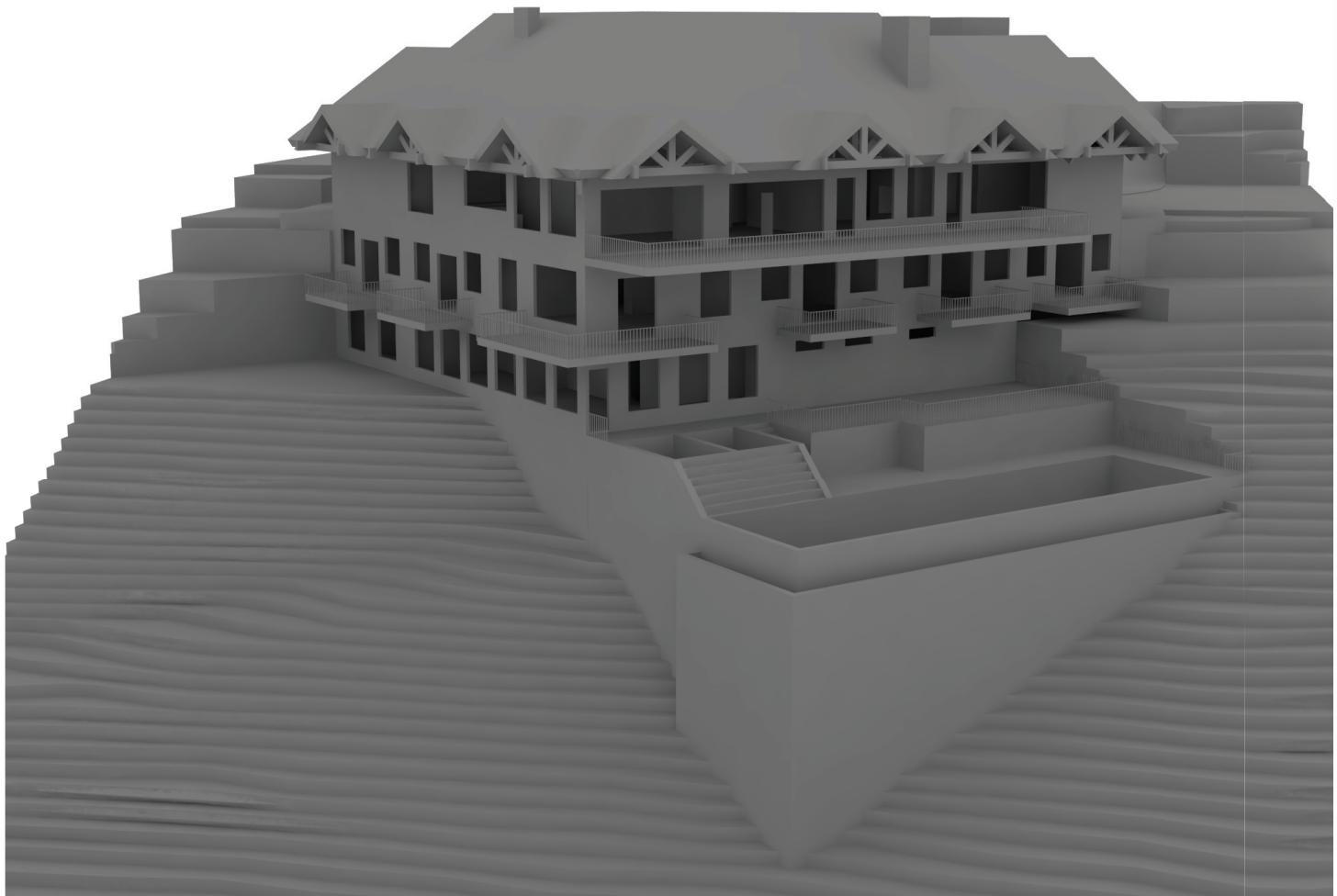
Concept Diagrams

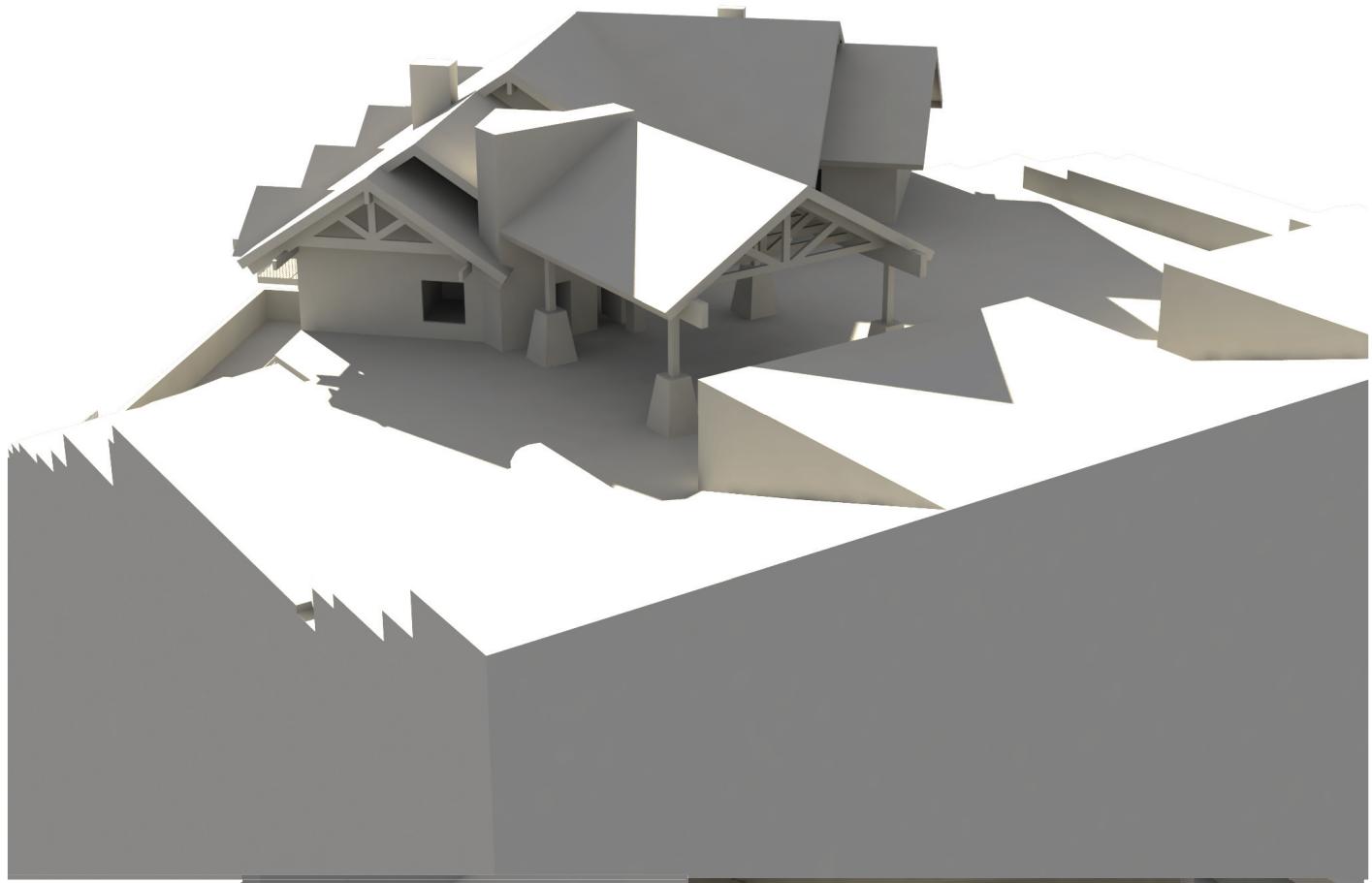
Studio 4: Retreat, Revelstoke, B.C., Canada[Designed in Rhino]

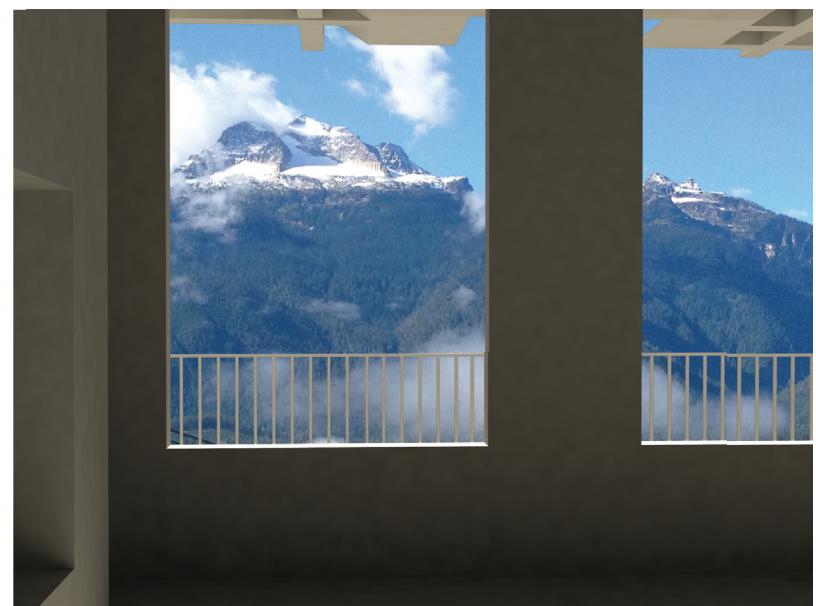
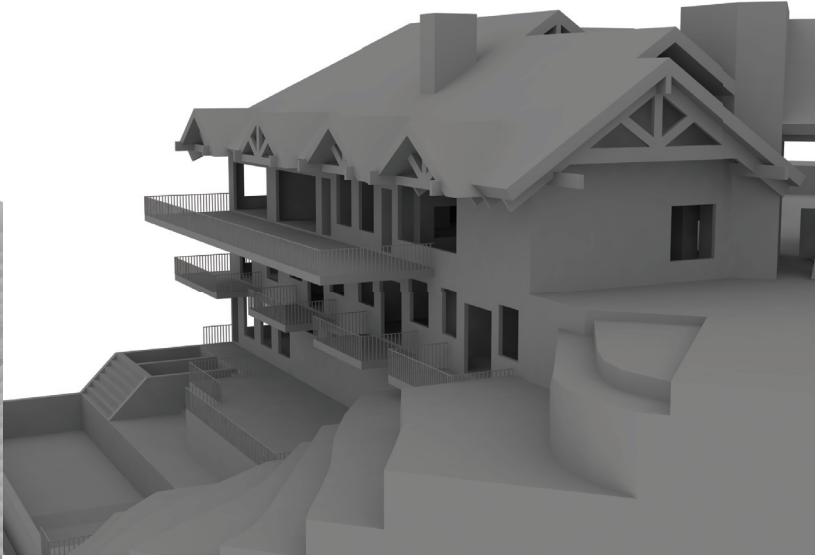
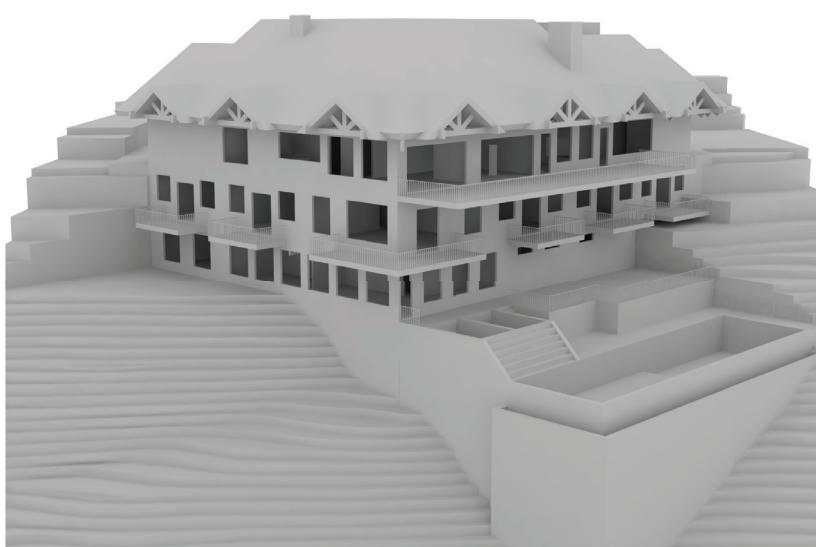
The project was to design a retreat up in the mountains by Revelstoke, B.C. in Canada. The location is next to a large ski resort that is very busy. In the winter there is a lot of snow but it doesn't get super cold so it is a good location to go to and during the summer there is nice weather to do activities such as bike riding and hiking

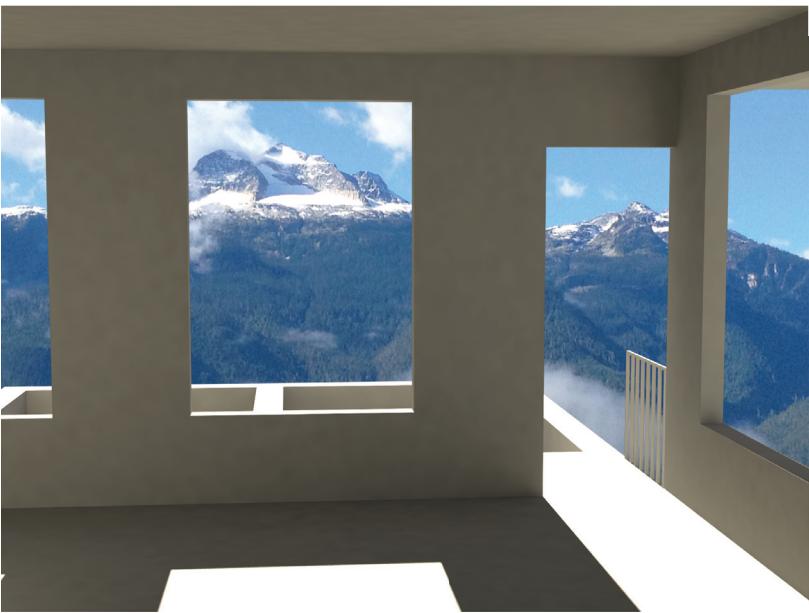
The idea behind this project was to design a retreat that could be a place for people to go and relax and enjoy the nature around them. The concept is that when a person arrives at the retreat they will feel relaxed and comfortable. This all starts with the fireplace in the entryway. When you enter the building you will see exposed beams which helps create a homey feeling. While each room has a view down the slope and of the surrounding mountains. The retreat has been designed to be used all year long. Such as the pools can be heated for winter or cool for summer times and you can also enjoy the views from the infinite pool.

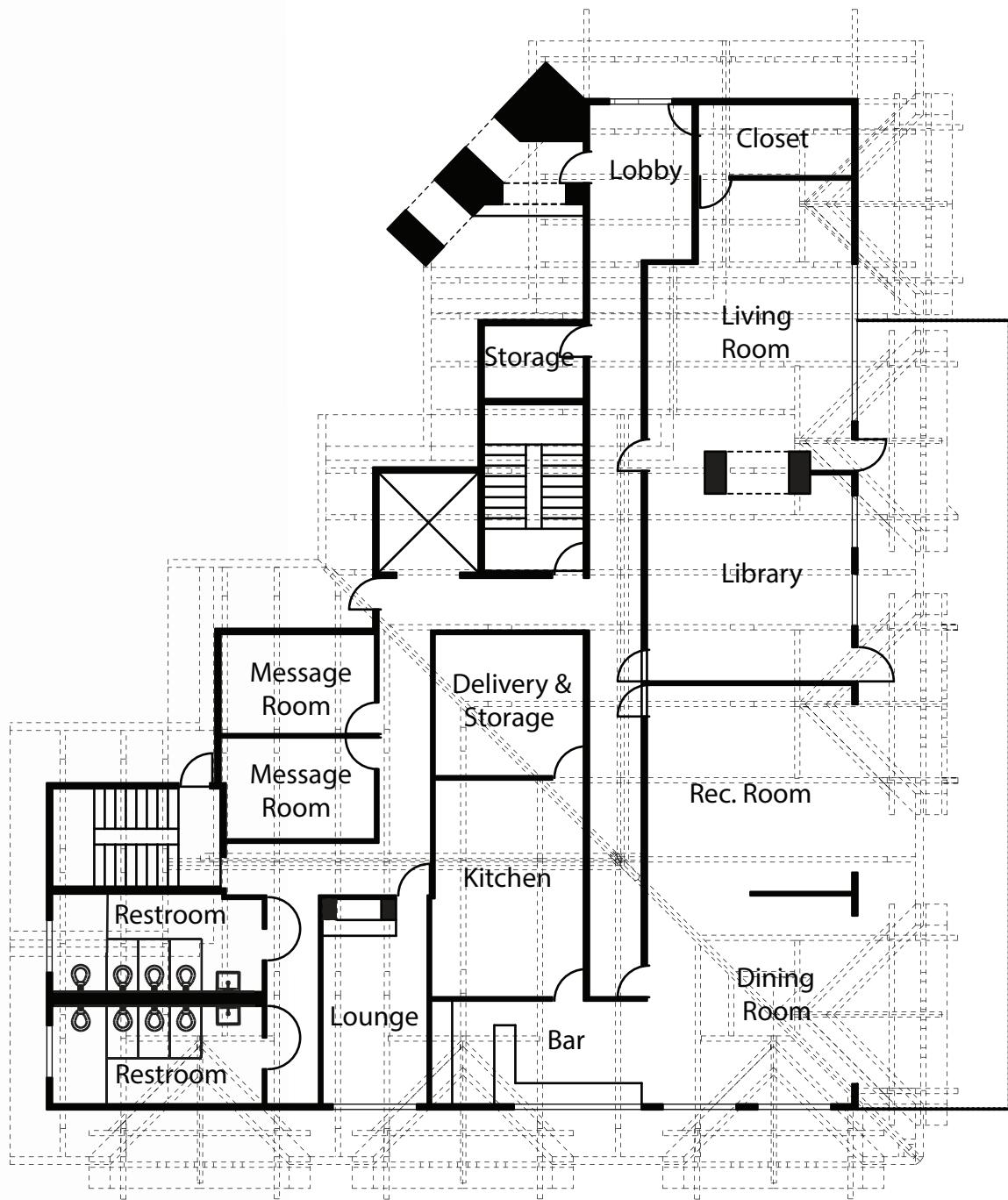
The concept of the building is mind body and soul the idea of the retreat is to rejuvenate all three. The top level is for the soul where you can be with other people to enjoy their company and rejuvenate your soul. The suite level is about rejuvenating your mind it allows you to be alone with yourself to just think and contemplate life. The bottom level is about the body it's where you can rejuvenate your body through the exercise rooms or the spas and pool.



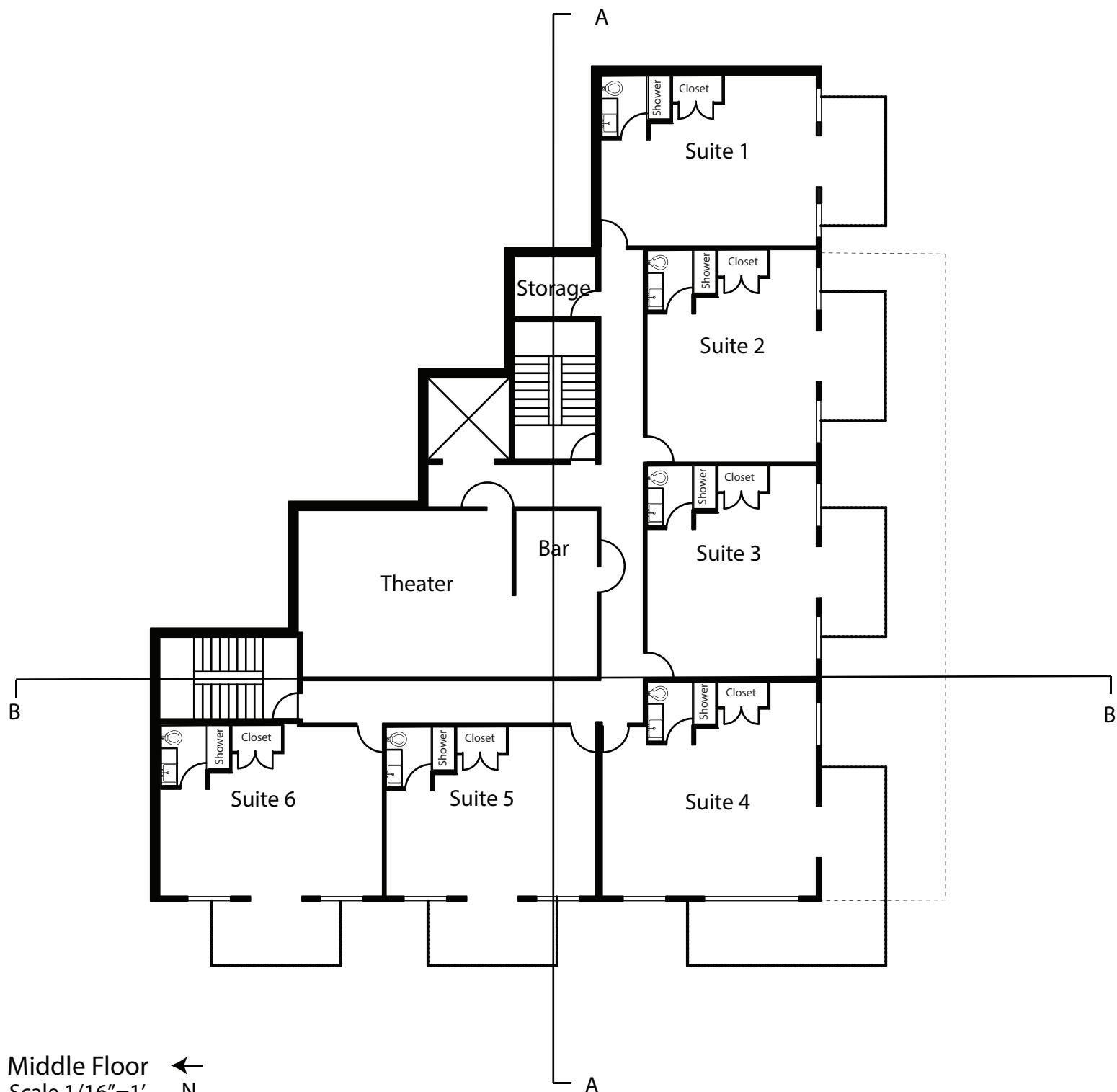


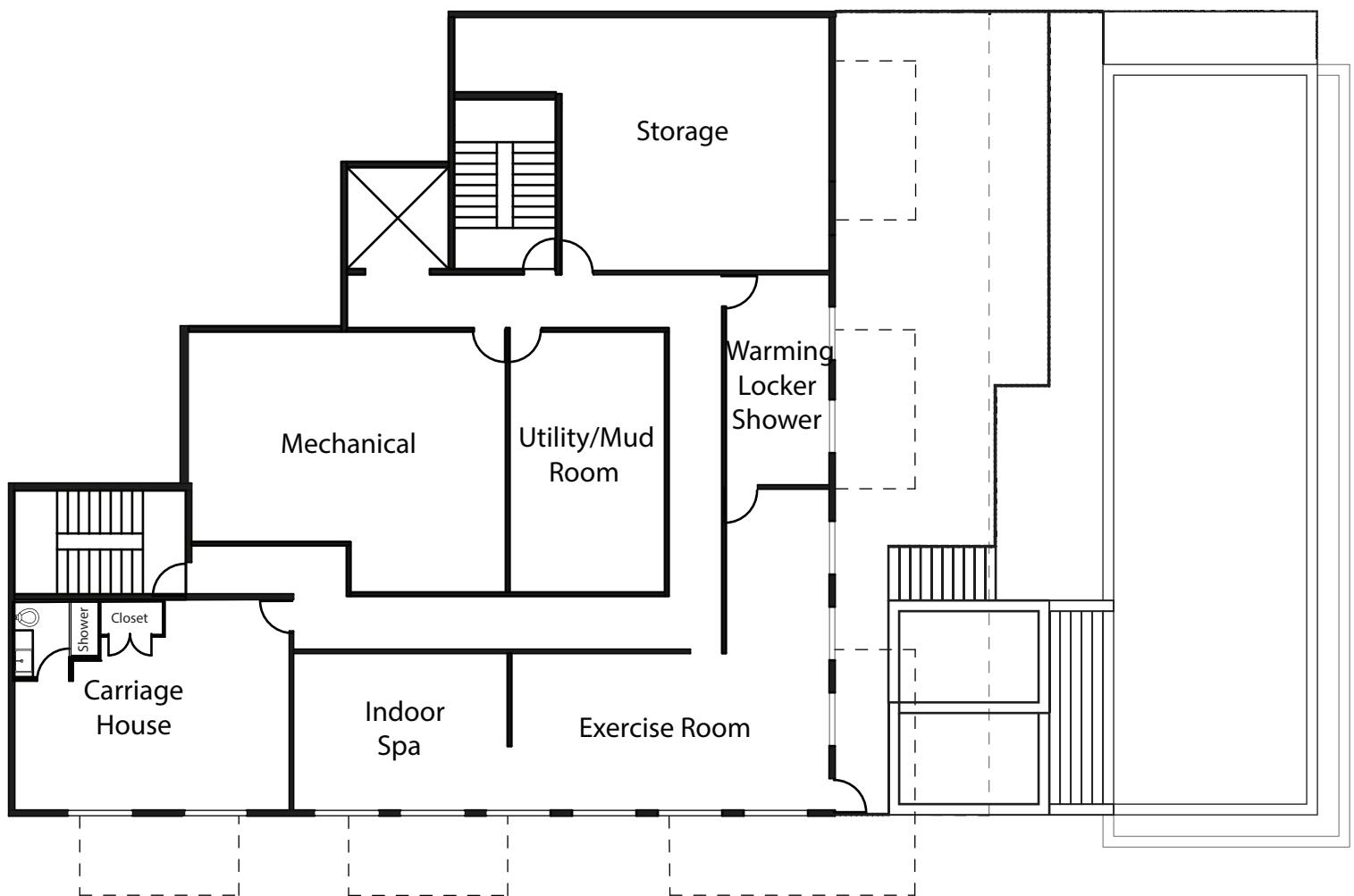




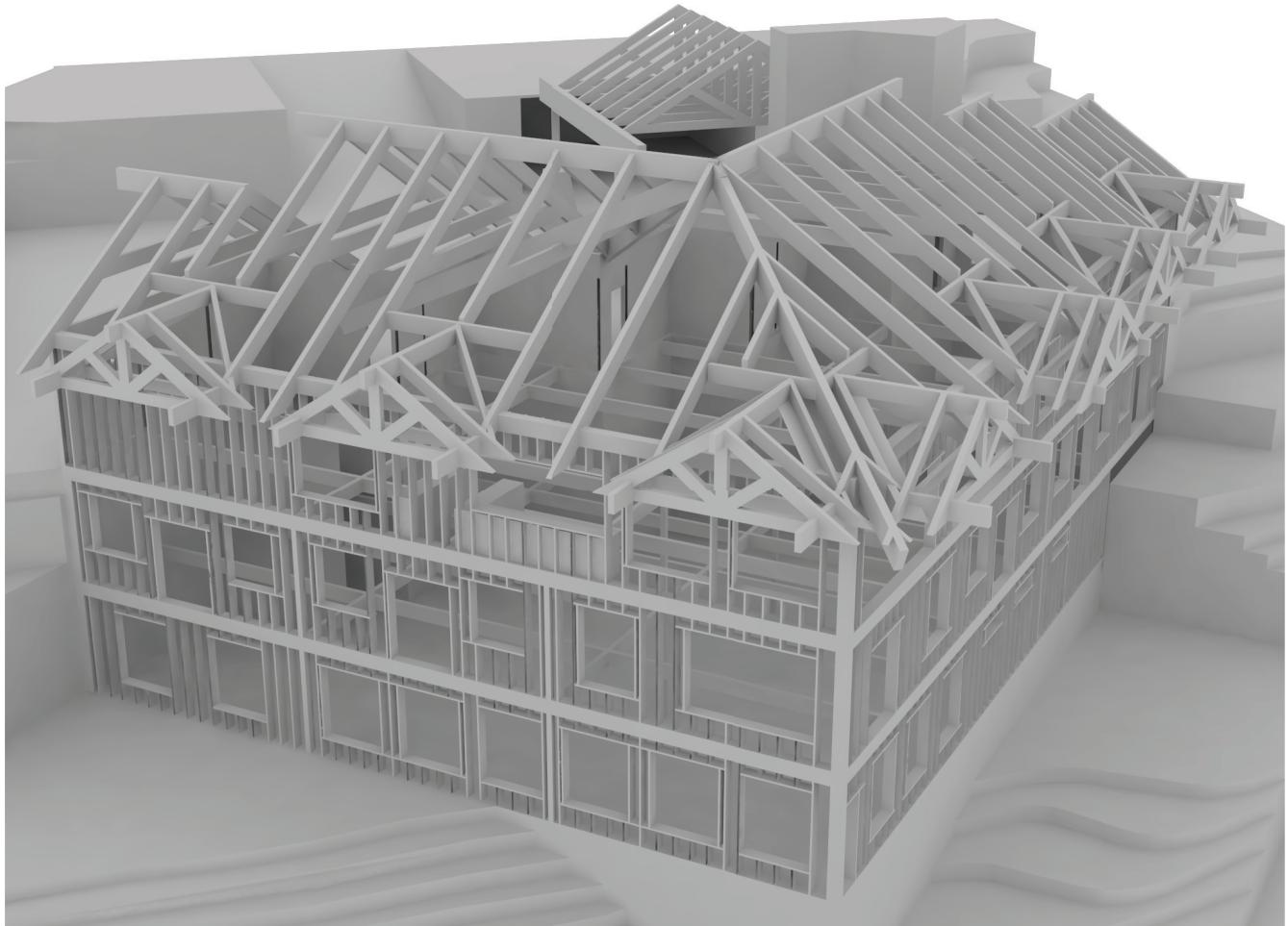


Top Floor ←  
Scale 1/16"=1' N

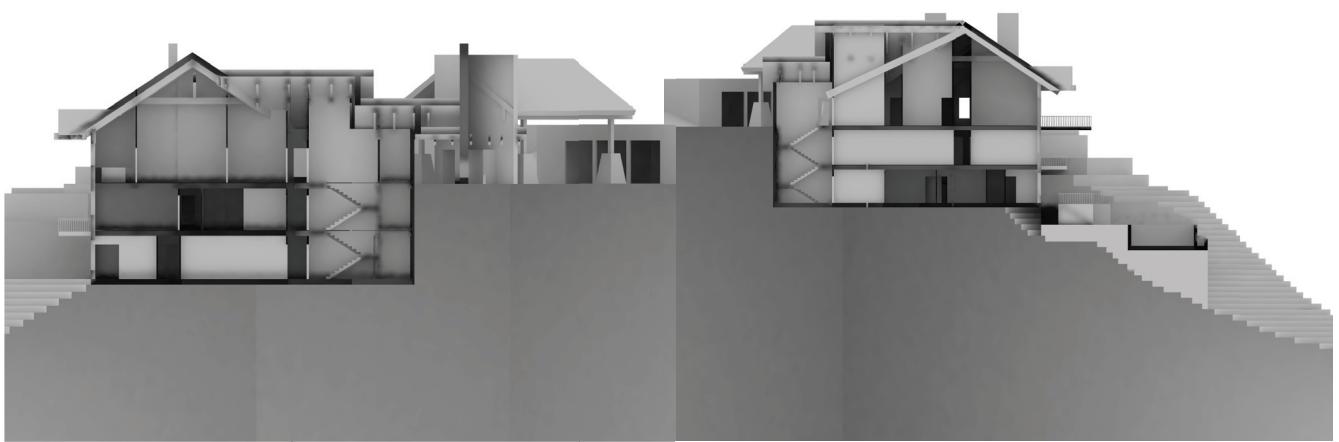




Bottom Floor ←  
Scale 1/16"=1' N

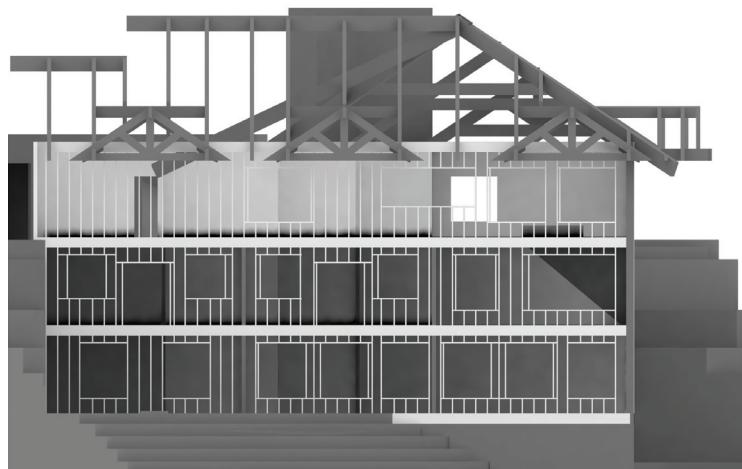


Structural Axonometric

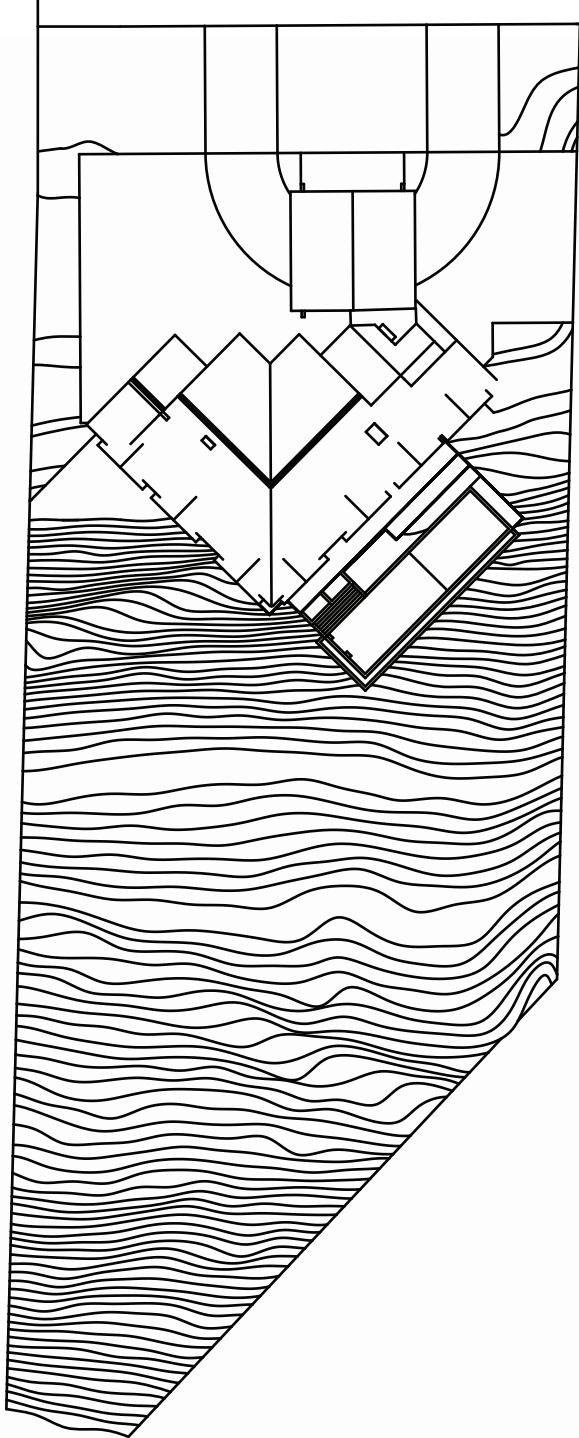
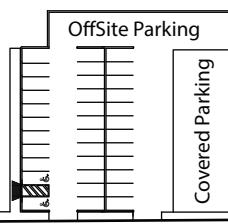


Section AA

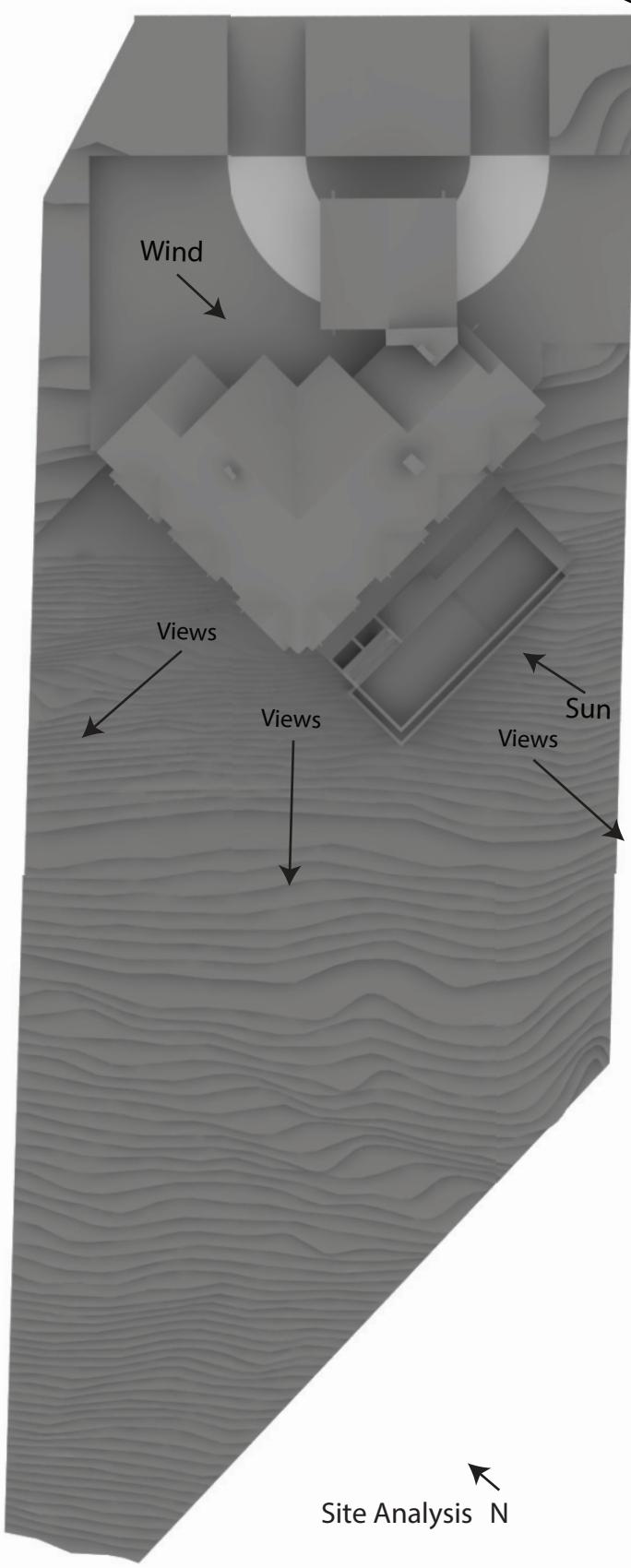
Section BB



Structural View



Site Plan  
Scale 1/64"=1' N

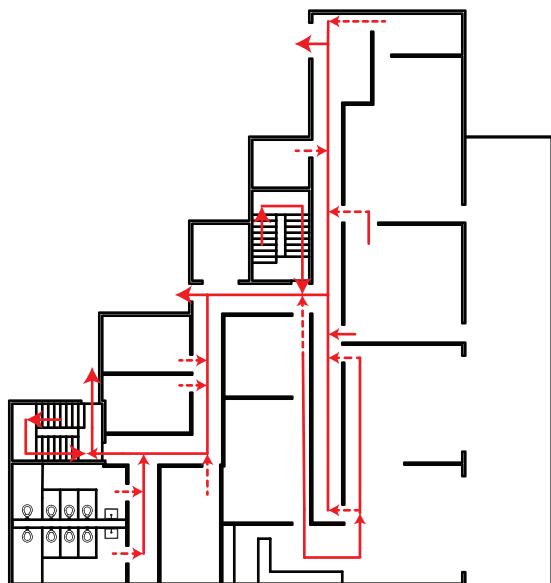


Top Floor	Area	Occupancy Load	Occupancy Type				
			Assembly Group 1	Assembly Group 2	Assembly Group 3		
Lobby	150 sf	3					
Coats	105 sf	2					
Restroom	400 sf	?					
Massage Room 1	150 sf	3					
Massage Room 2	150 sf	3					
Community Rec. Room	400 sf	40	Parking Garage	1131 sf	5		
Lounge	288.5 sf	28	Pool Level	Area			
Community Living Area	520 sf	52	Outdoor Kitchen & Eating	400 sf	26		
Library/Study	400 sf	40					
Delivery & Storage	210 sf	2	Upper Deck	650 sf	43		
Dining Room	400 sf	30	Pool Deck	475 sf	31		
Bar	200 sf	15	Hot Pool	150 sf	10		
Kitchen	315 sf	3	Cold Pool	150 sf	10		
Middle Floor	Area		Main Pool	1,400 sf	93		
Suite 1	500 sf	2	Top Floor Deck	1,079 sf	71		
Suite 2	500 sf	2					
Suite 3	500 sf	2	Suite 1 Deck	120 sf	8		
Suite 4	600 sf	3	Suite 2 Deck	120 sf	8		
Suite 5	500 sf	2	Suite 3 Deck	120 sf	8		
Suite 6	500 sf	2	Suite 4 Deck	304 sf	20		
Theater	500 sf	# of Seats (20)	Suite 5 Deck	120 sf	8		
Bar	100 sf		Suite 6 Deck	120 sf	8		
Storage	100 sf	.3	Outdoor Total Area	4,356 sf	352		
Bottom Floor	Area						
Warming Locker Room	200 sf	4	Occupancy Loads				
Exercise Room	600 sf	12					
Indoor Spa	300 sf	20					
Carriage House	500 sf	2					
Mechanical Room	750 sf	2					
Mud Room/Utility	375 sf	7					
Storage	616 sf	2					
Sub Total	10,529.5 sf	310					
Circulation	2,640.5 sf						
Total Finished Area	13,170 sf	310					

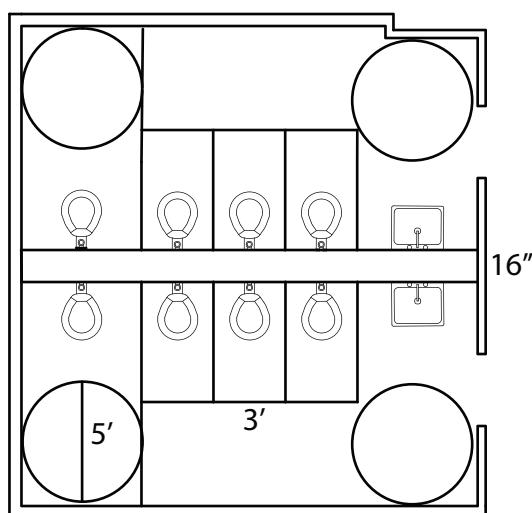


Public	Private	Social	Intimate	
				Entry Reception
				Coats
				Restrooms
				Community Living Area
				Off./Study/Library/Conf.
				Community Rec. Roon
				Community Dining
				Bar Area/Wine Cellar
				Kitchen
				Delivery & Storage
				Theater
				Suite One
				Suite Two
				Suite Three
				Suite Four
				Suite Five
				Suite Six
				Massage Room One
				Massage Room Two
				"Carriage House"
				Mud Room Utility
				Exercise Area
				Lockers & Showers
				Discretionary Pool Area
				Cold Pool
				Hot Pool
				Outside Kitchen/Eating
				Misc. Patio/Decks
				Parking
				Shuttle Parking
				Mech.
				Storage

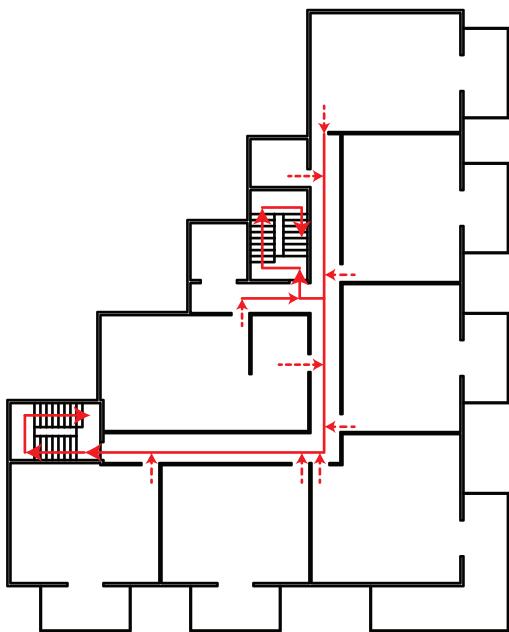




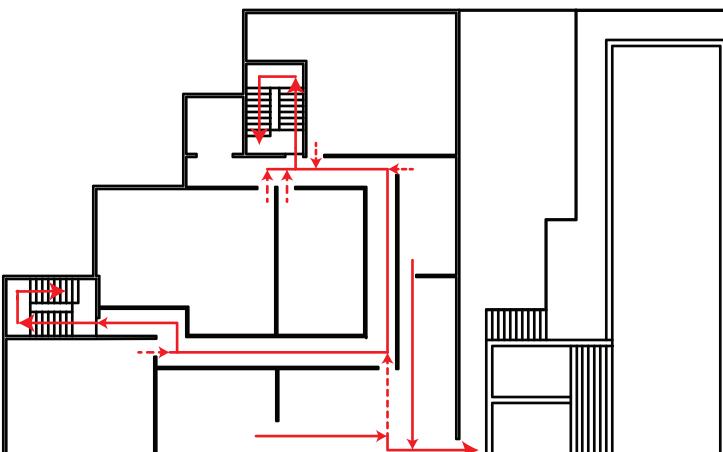
Main Level



Bathroom Detail Scale 1/8"=1'



Middle Level



Bottom Level

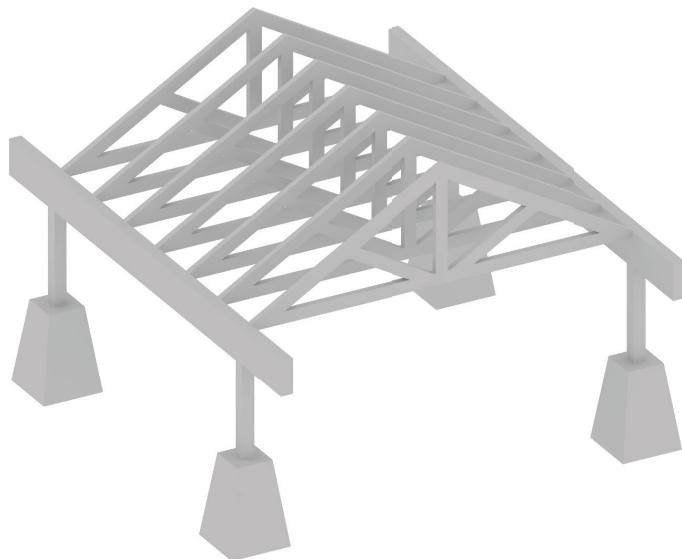
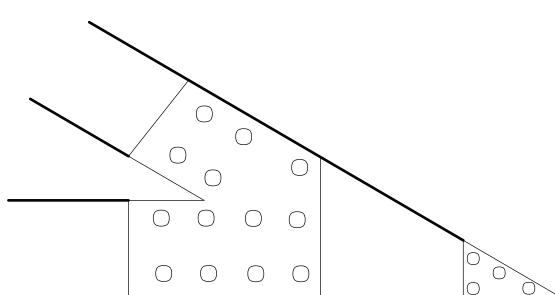
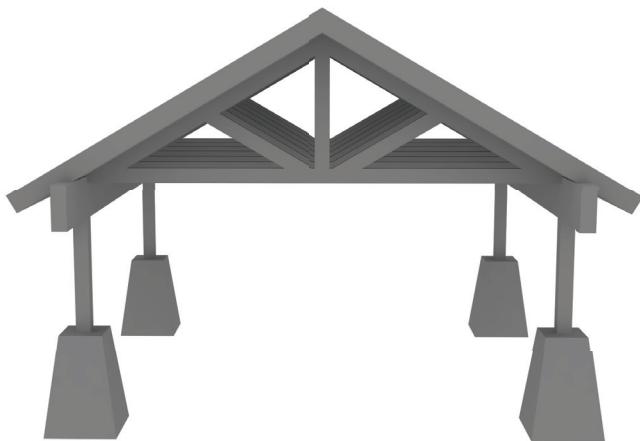
Egress Routes Scale 1/32"=1'

← N

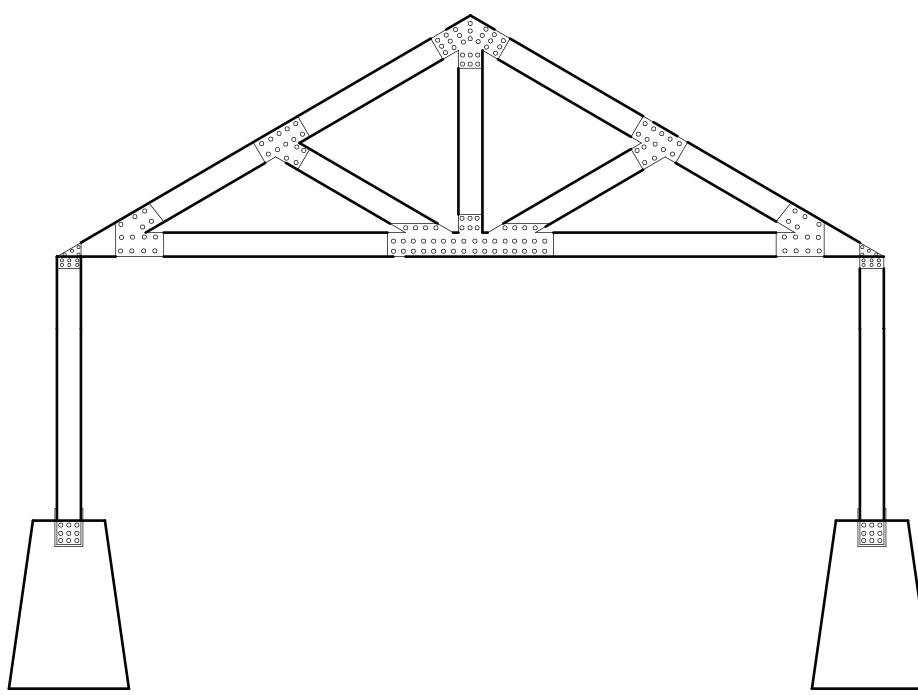
Assembly max travel distance unsprinklered 200'  
 Assembly max travel distance sprinklered 250'  
 Assembly open air seating with combustible constucion 400'  
 or unlimited distance with noncombustible construction  
 Max common path of egress travel:  
 30' for assembly fixed seating with 50 or more occupants  
 75' for others  
 R-1 (Hotel & Motel) must be sprinklered; travel distance 250'  
 and 75' common egress path

Largest area with single exit:  
 Assembly 49 occupants  
 R-1 10 Occupants

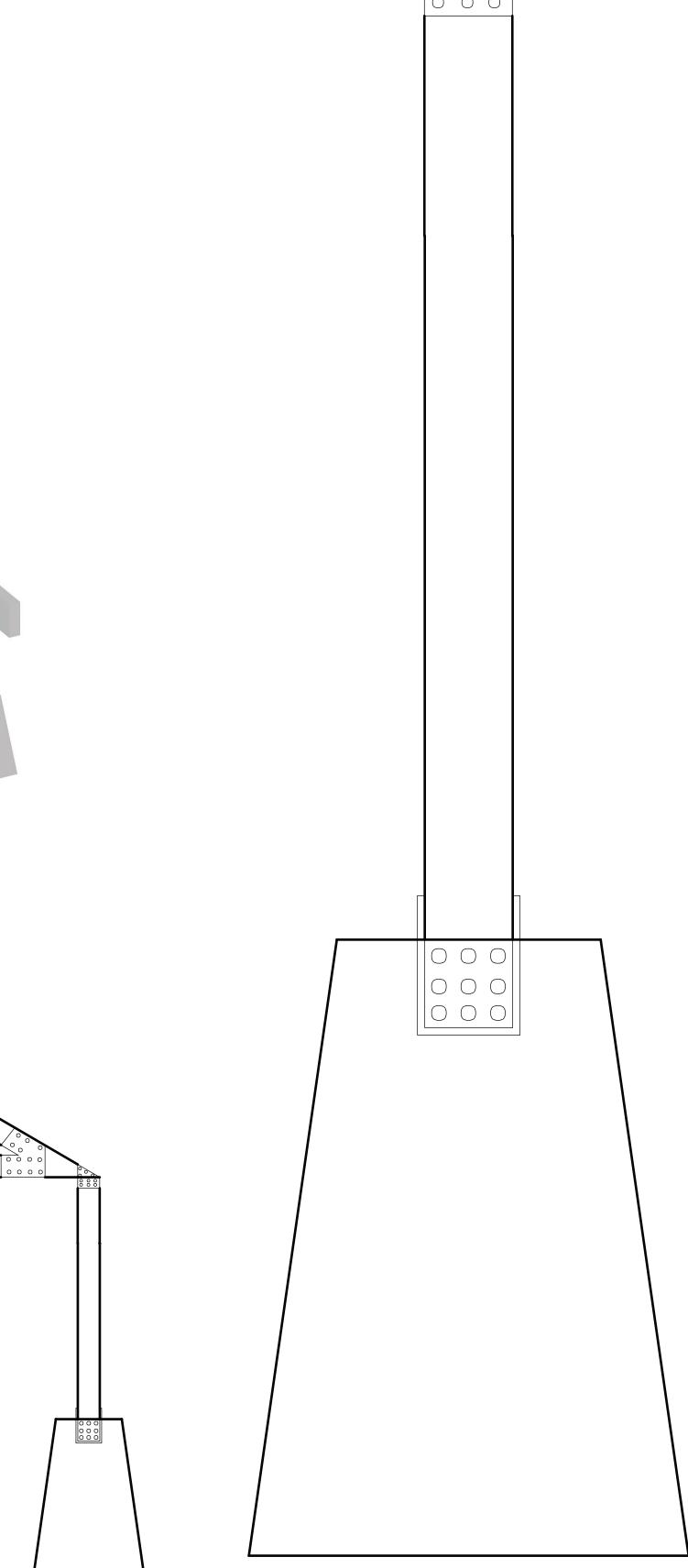
Fixture requirements:  
 Water closets:  
 Assembly: Male 1 per 125 occupants; Female 1: 65  
 Lavatories: 1 per 200  
 Drinking Fountian 1 per 1000 occupants  
 Bussiness:  
 Water Closets: First 50 occupants 1 per 2, Additional  
 occupants 1 per 50  
 Lavatories: First 80 occupants 1 per 40, Additional  
 occupants 1 per 80  
 Drinking Fountian: 1 per 1000 occupants  
 Residential R-1:  
 Water closet: 1 per sleeping unit  
 Lavatories: 1 per sleeping unit  
 No water fountian



Structural Axonometric



Scale 1/8"=1'

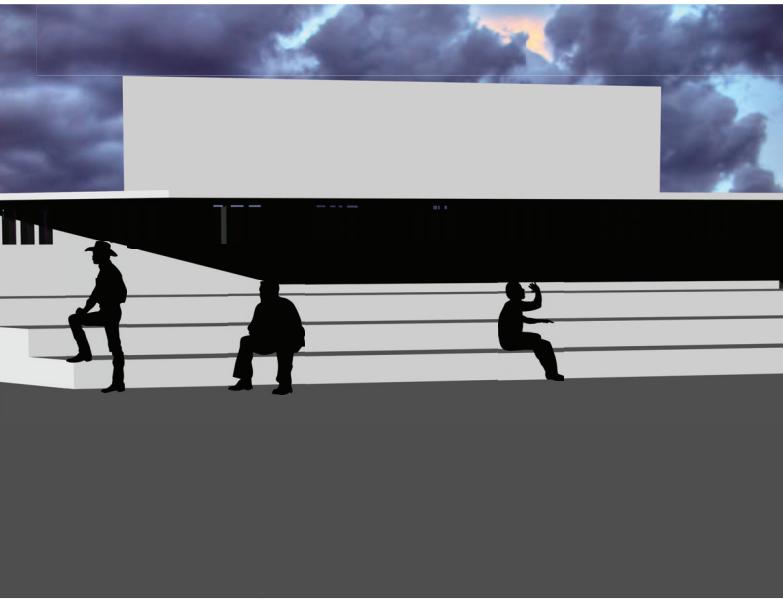
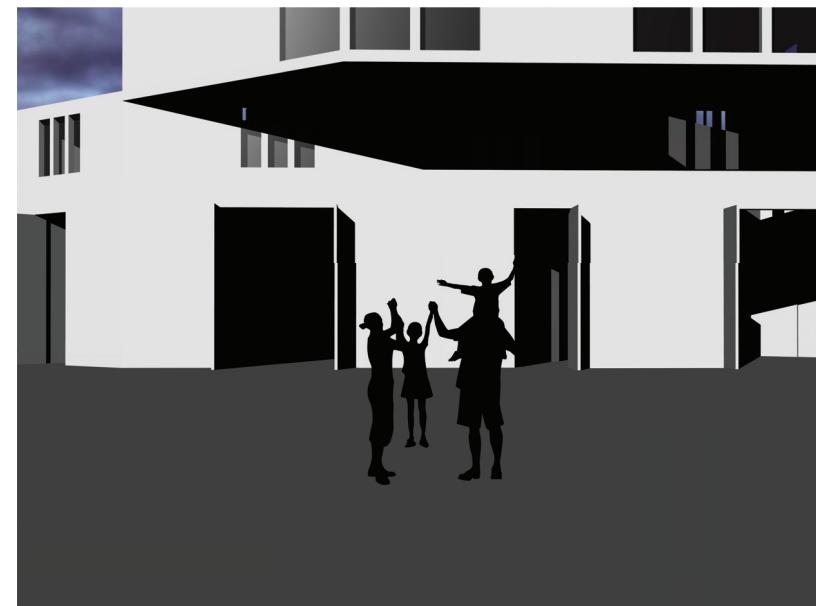
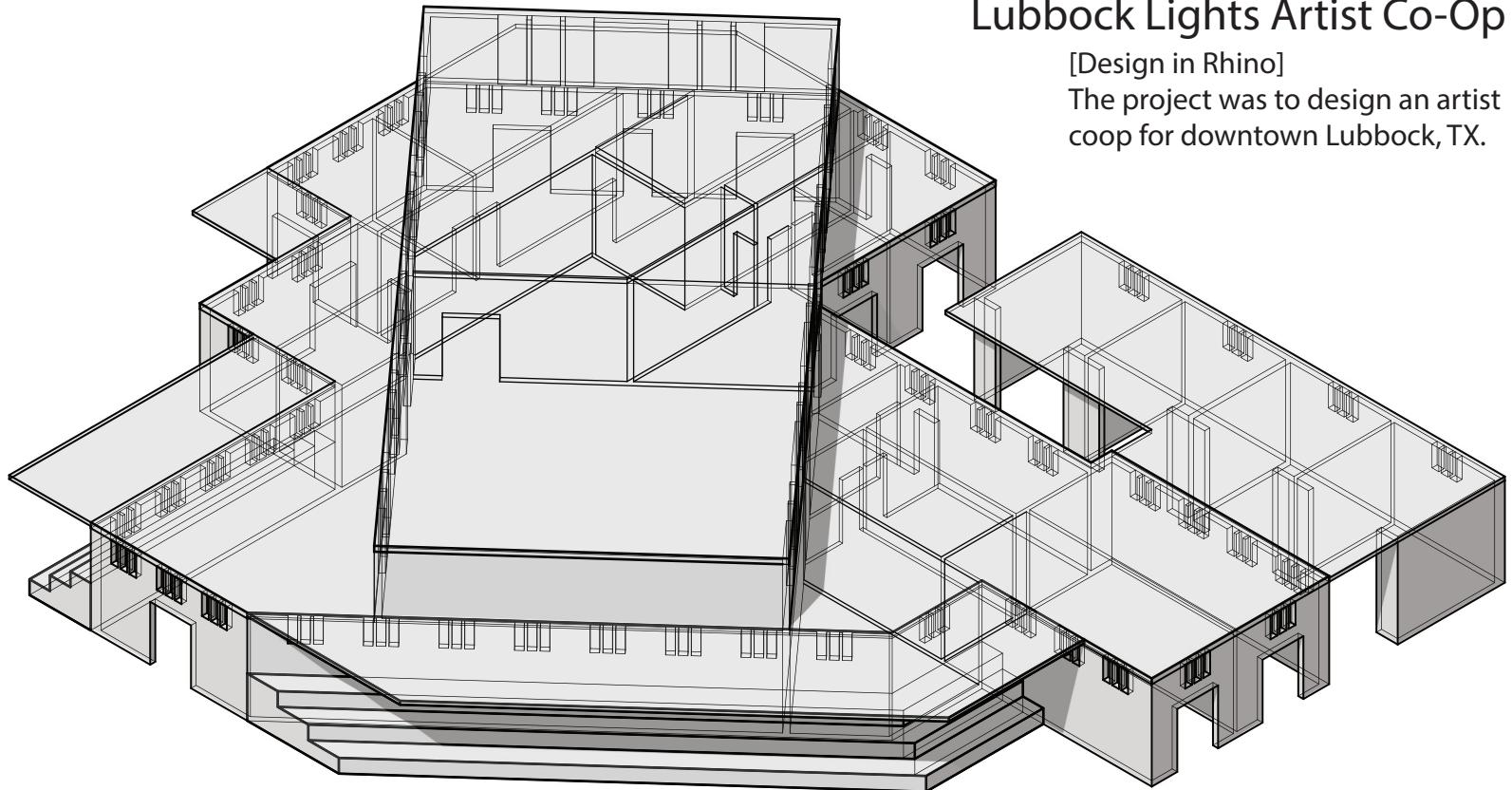


Scale 1/2"=1'

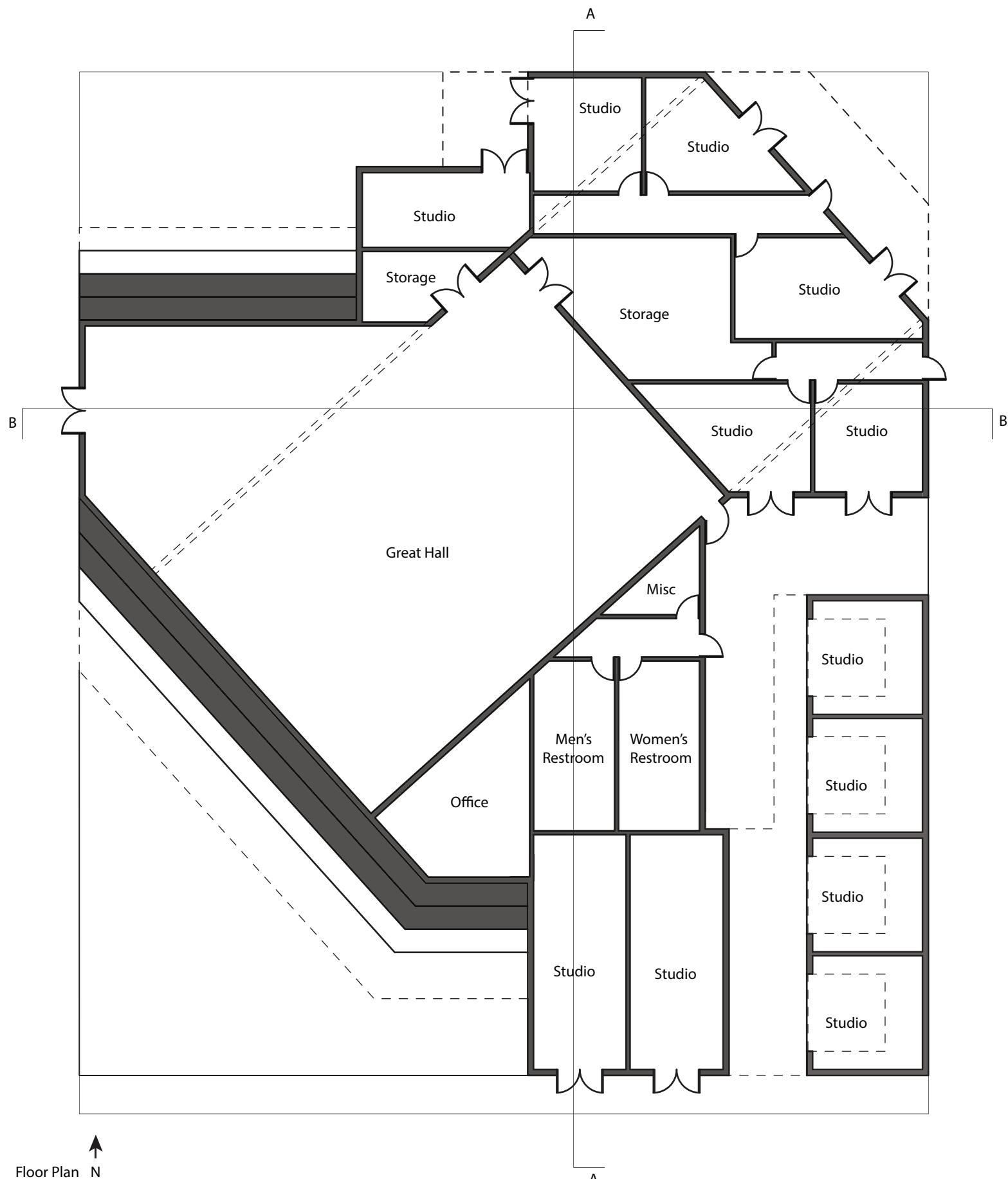
# Lubbock Lights Artist Co-Op

[Design in Rhino]

The project was to design an artist coop for downtown Lubbock, TX.

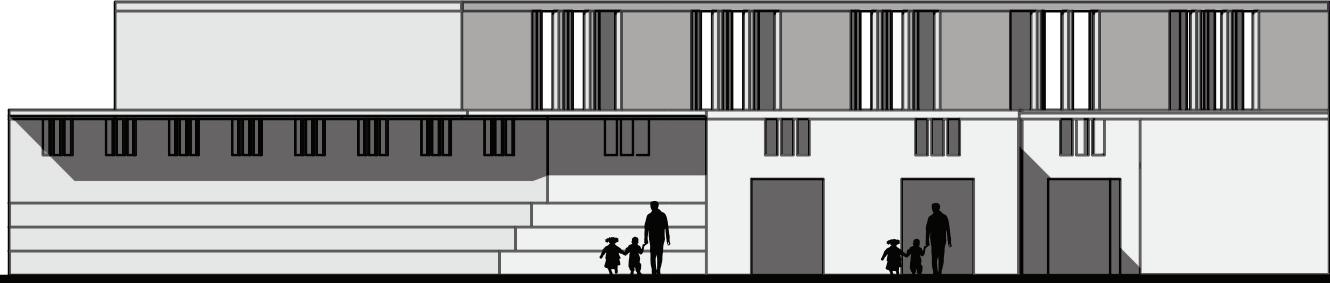


# Lubbock Lights Artist Co-Op

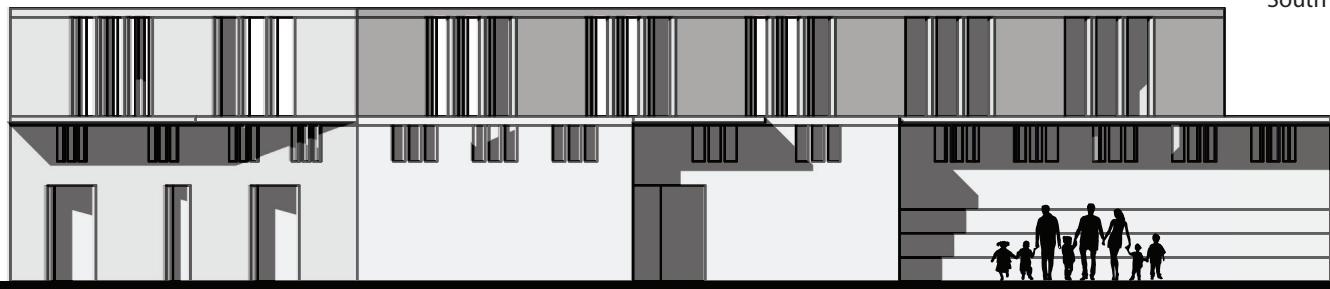


## Floor Plan N

Scale 1/8"=1'



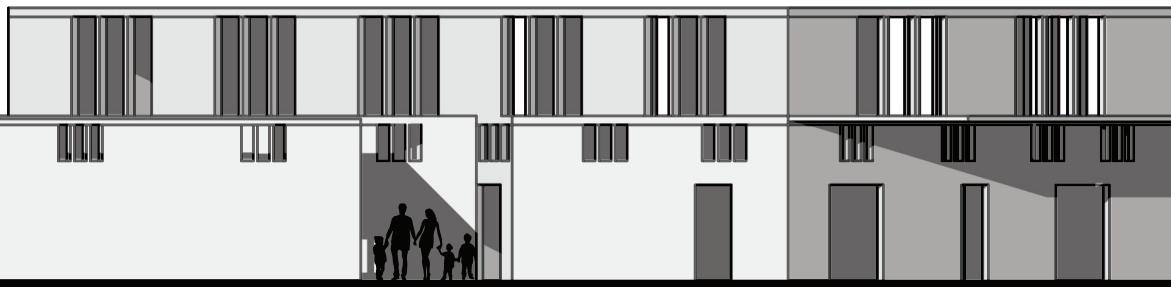
South Elevation



North Elevation

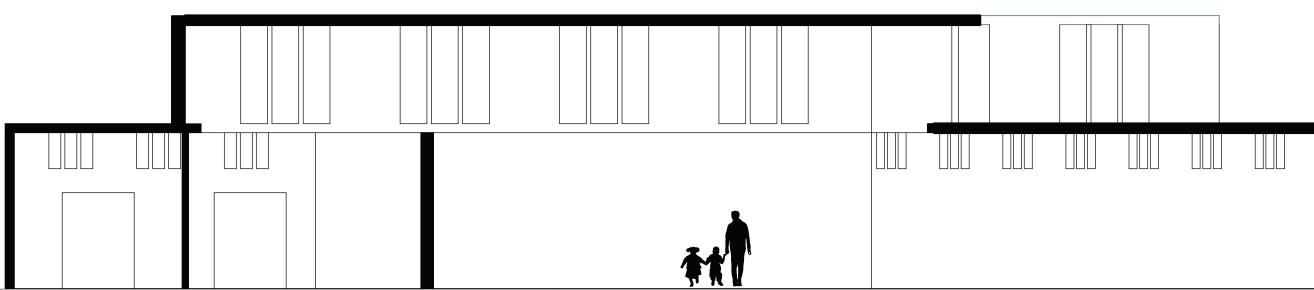


West Elevation



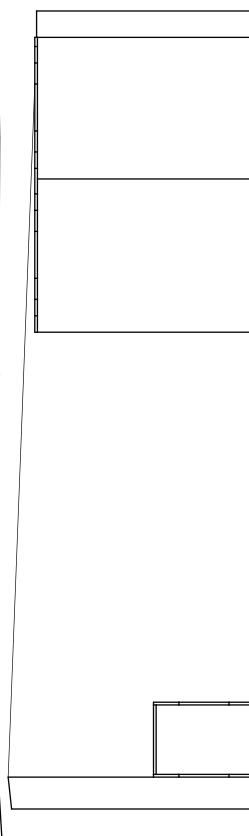
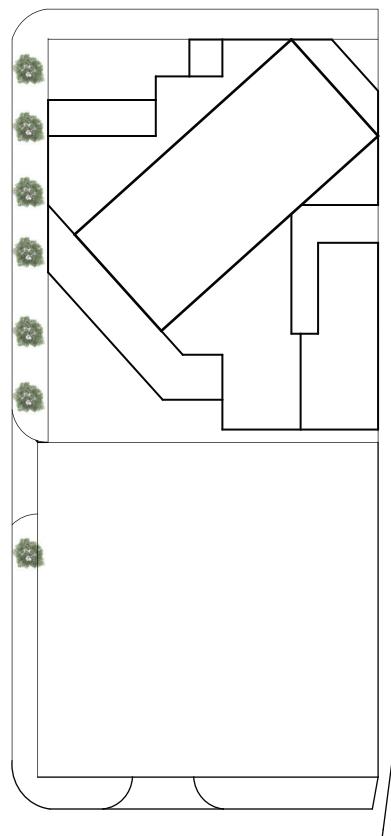
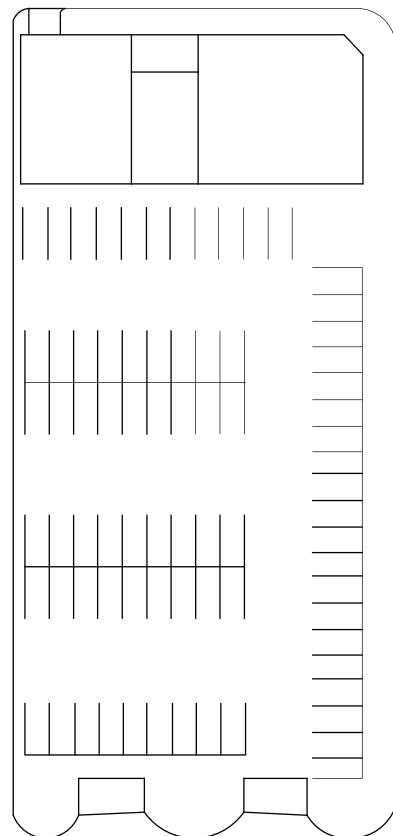
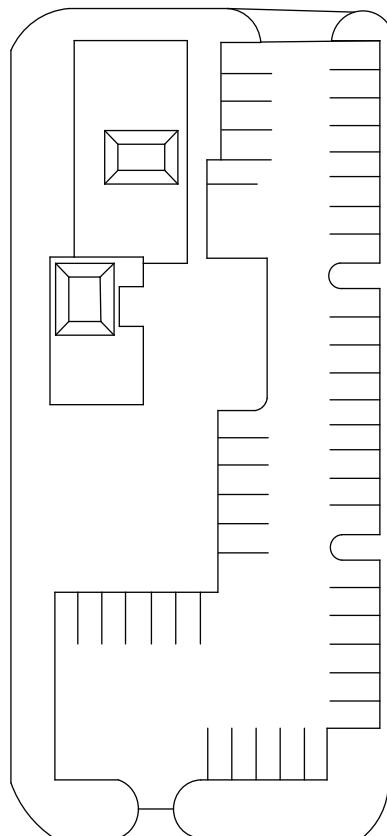
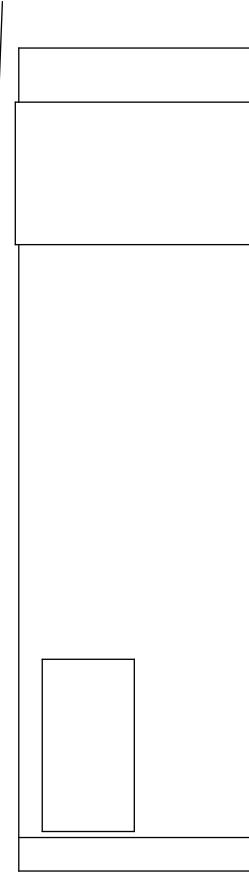
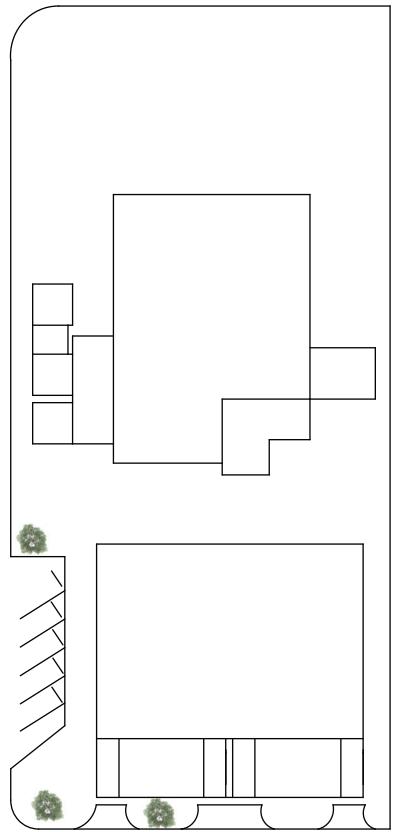
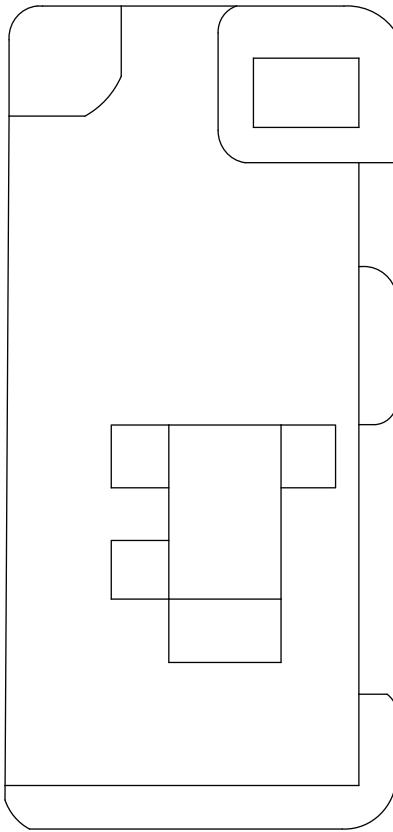
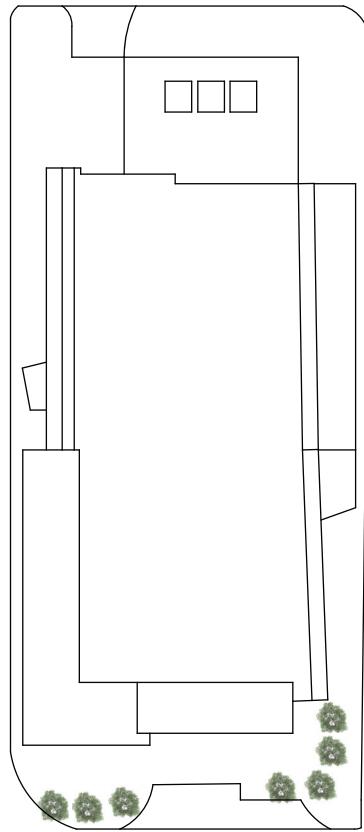
East Elevation

Section AA



Section BB

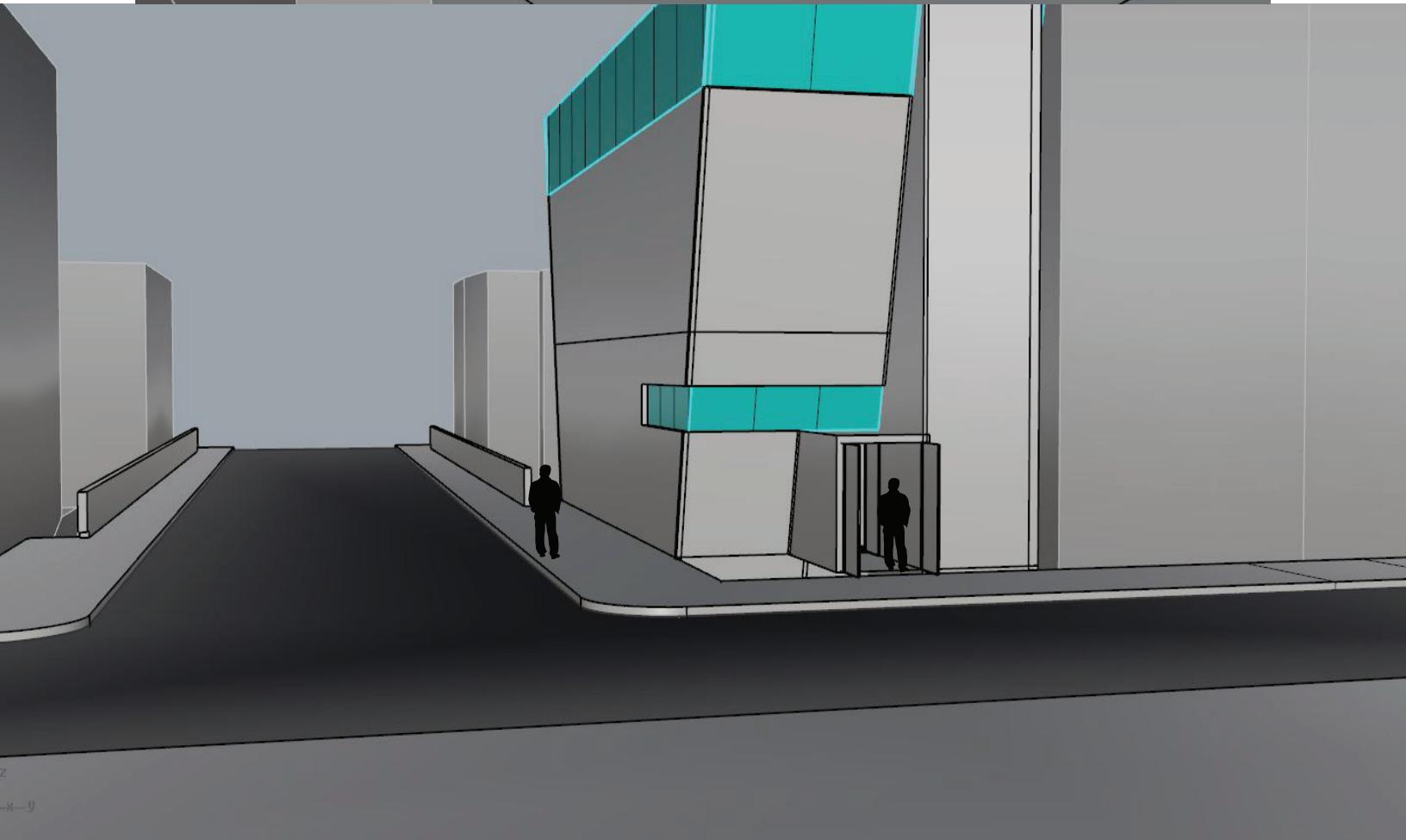
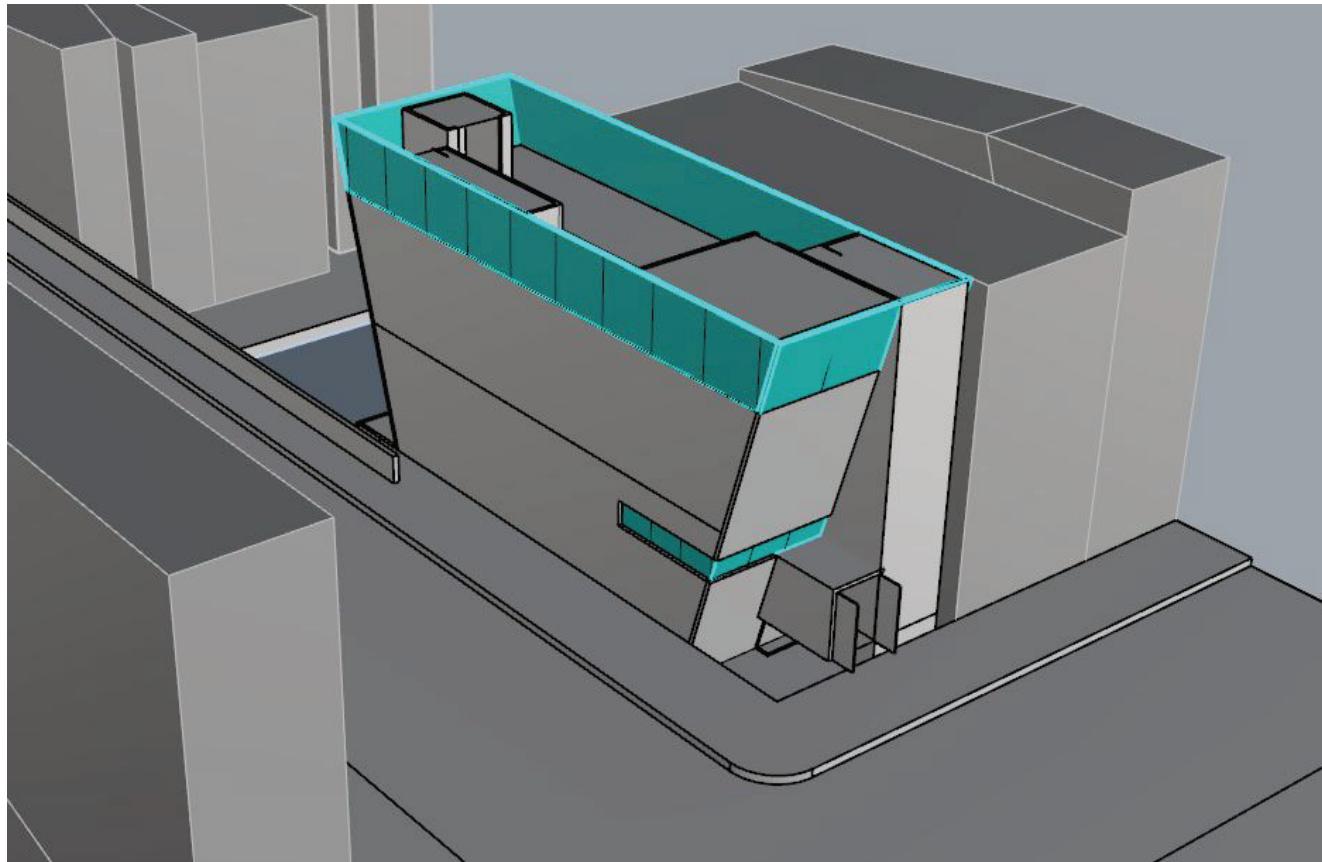




Scale 1/64" = 1' N

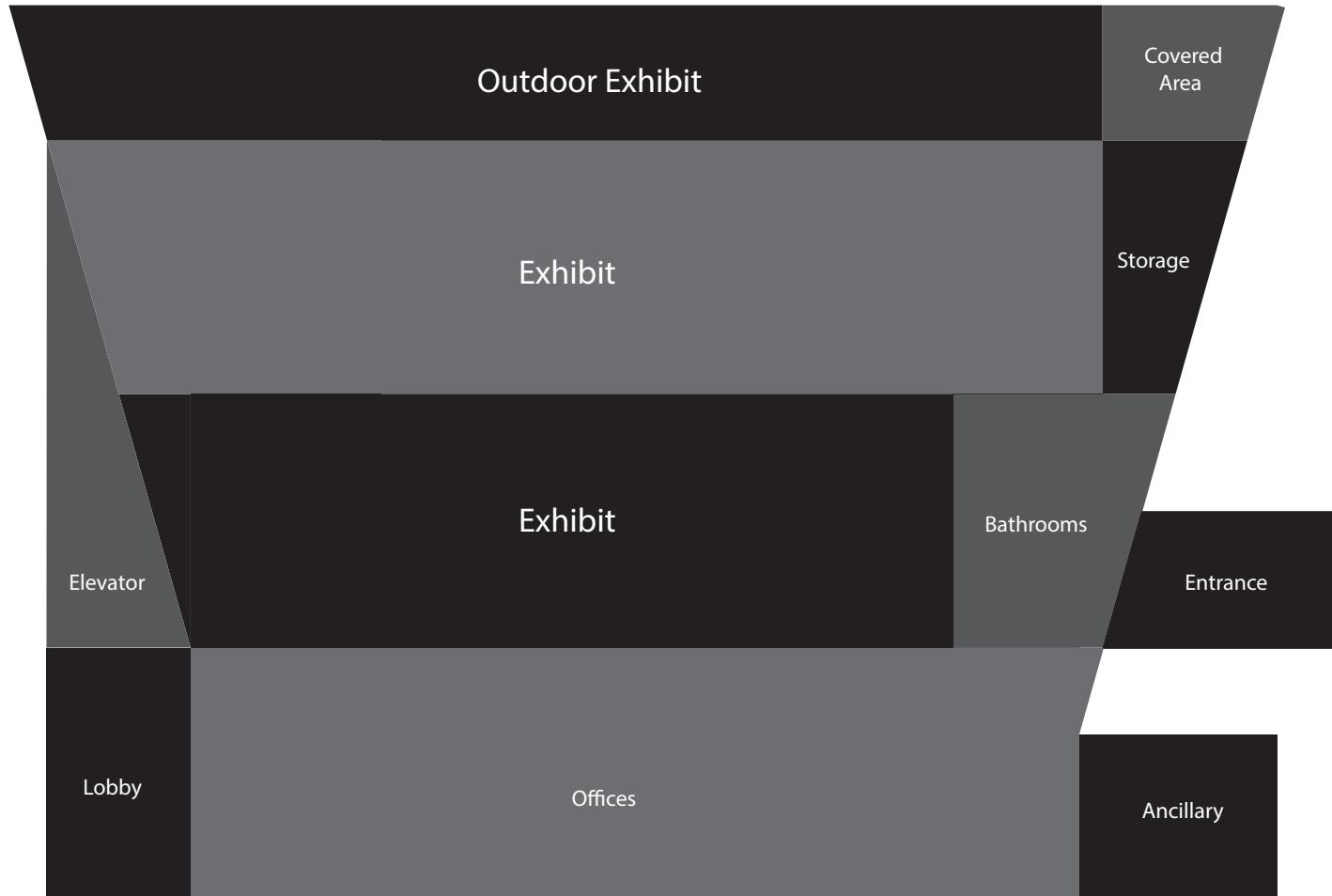
## Studio 2: River Walk Museum [Design in Rhino]

The design project was to design a museum located on the River Walk in San Antonio.



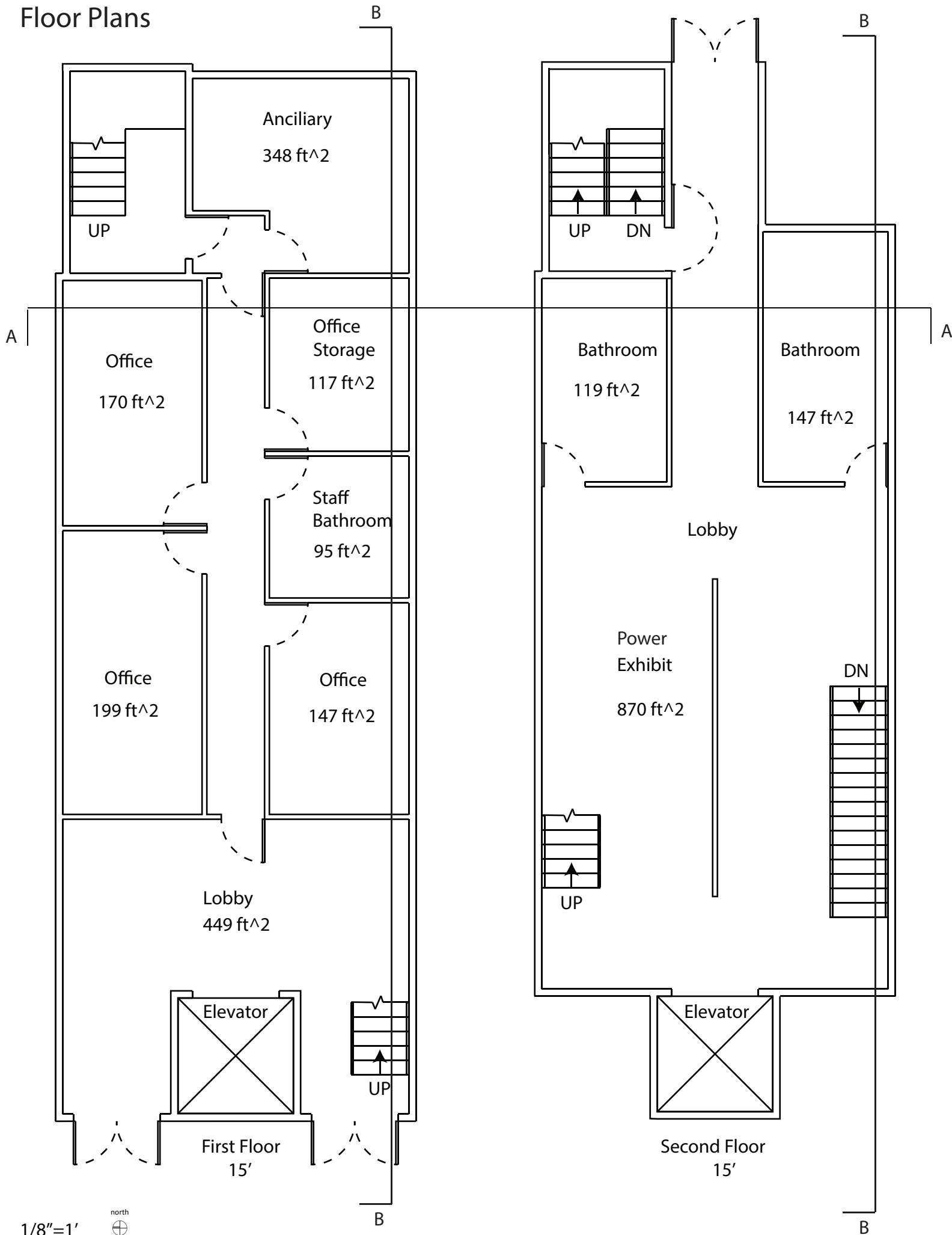
## Statement of Intent

For this project we were tasked with creating a museum for an instrument of our choosing. The instrument I choose to do was the drum. When designing the museum I wanted to bring in some of the characteristics of the drum into the building. What I choose to focus on in this aspect is the power of the drums. In order to achieve the feeling of power in the building I focused on the geometry of the building and its layout. For the geometry of the building shape of the building I took the concept of the triangle and pyramid shape and adapted them to be used in my building design. As far as the floor plan I focused on strong straight forward moves. There are no curves in the building it is all orthogonal angles which are powerful and simple. This helps gives the feeling of power and lets you feel it. We were also told that the building would be located on a river so I choose to incorporate that in to the building design. While I could actually physical have the building interact with the building I could choose to have it still recognizes that the river is there. In order to do this I choose to make the elevator have a glass front so that people could see the river as they ride the elevator. Also on the top floor which is actually the roof it is a sculpture garden with all glass walls surrounding the space so that you can see the landscape including the river all around you. This area allows people to relax outside and enjoy the weather and the view of the river. I also include an atrium on the ground floor by the entrance from river which also people to enjoy the day while being protected still since it's enclosed in glass. Overall the building projects the feeling of power. Which is the aspect of the drums that I chose to focus on in the design of the building.



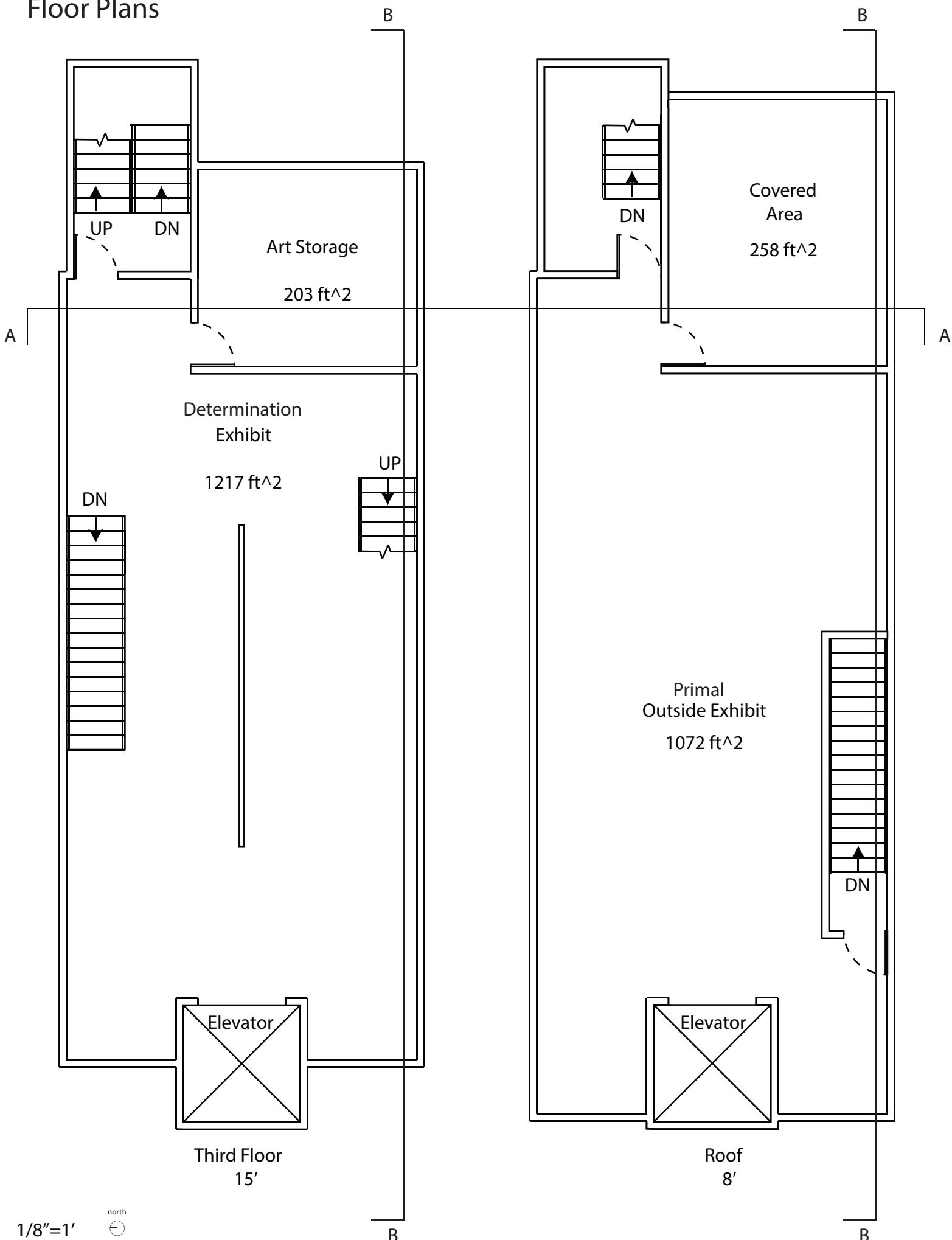
Concept Diagram

## Floor Plans



1/8"=1'

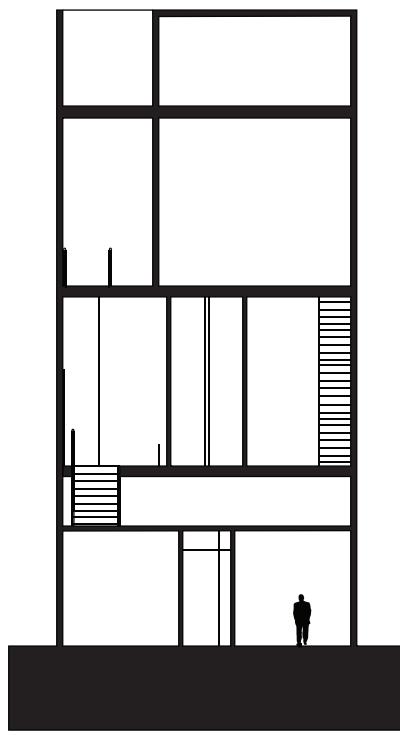
## Floor Plans



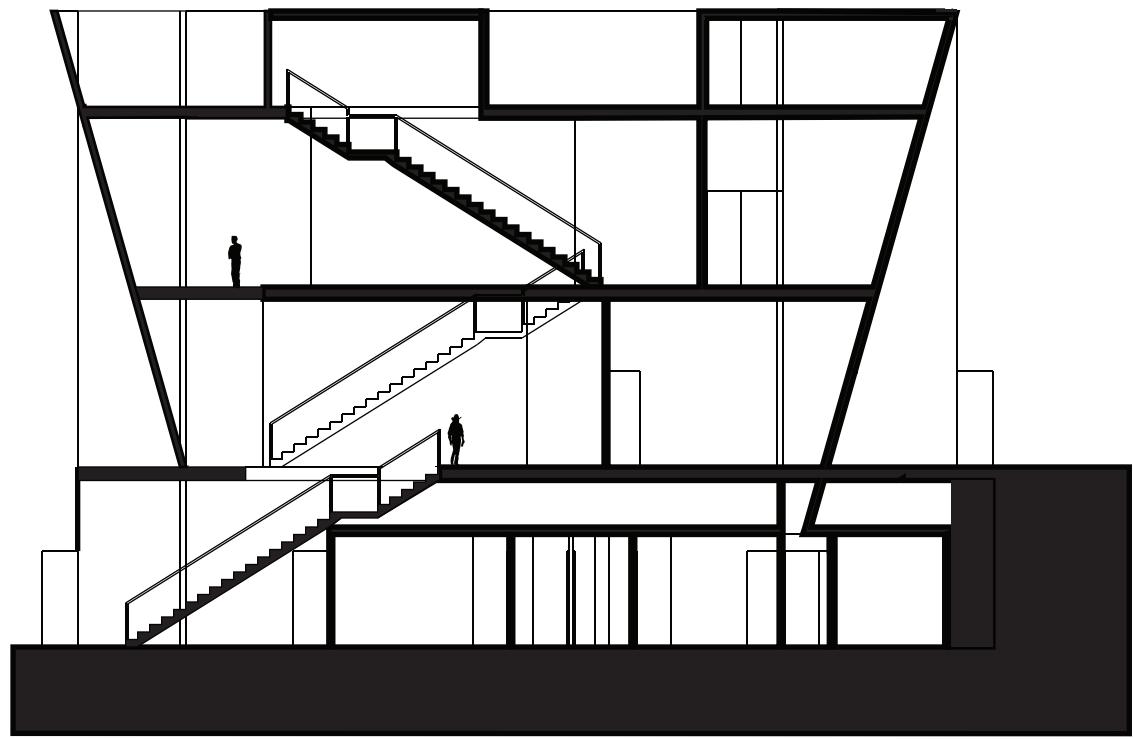
1/8"=1'

north

## Sections



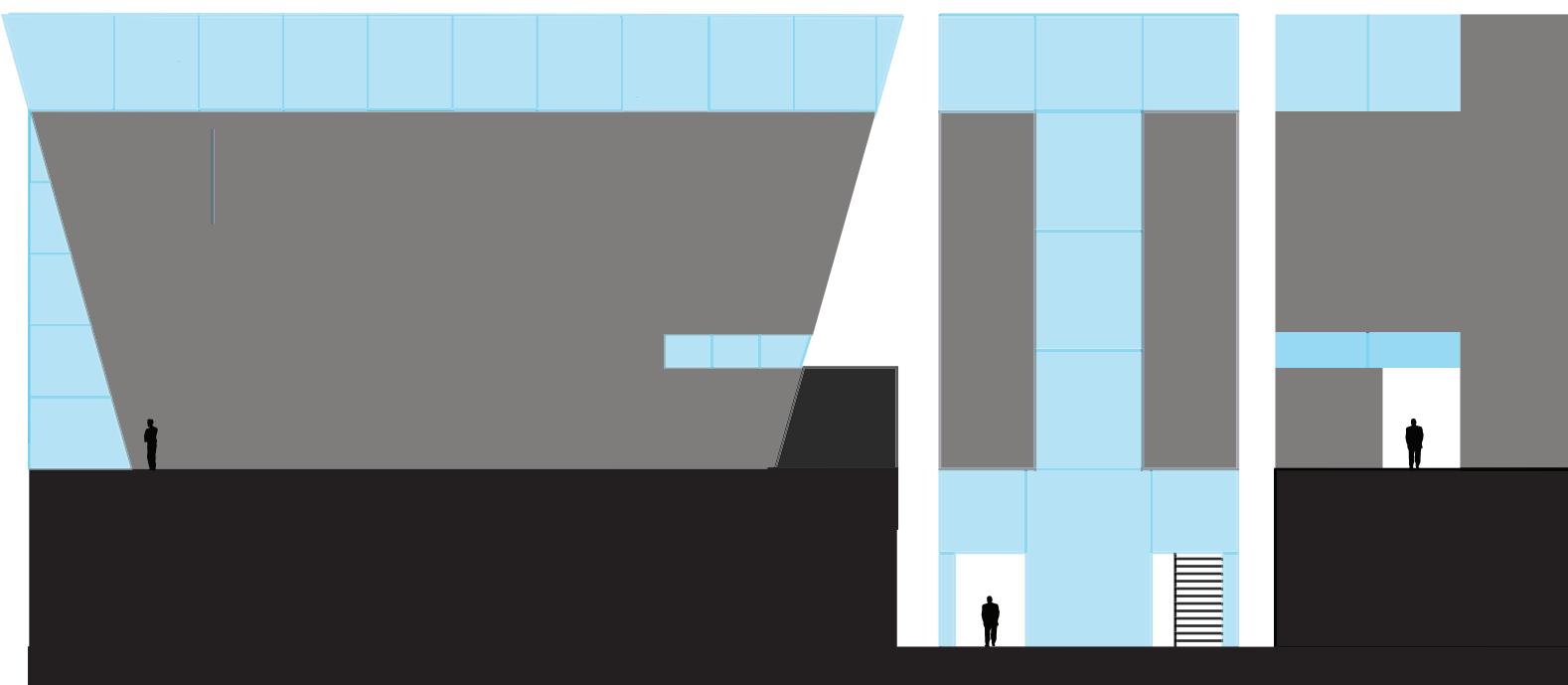
Section A-A



Section B-B

Scale 1/16"=1'

## Elevations



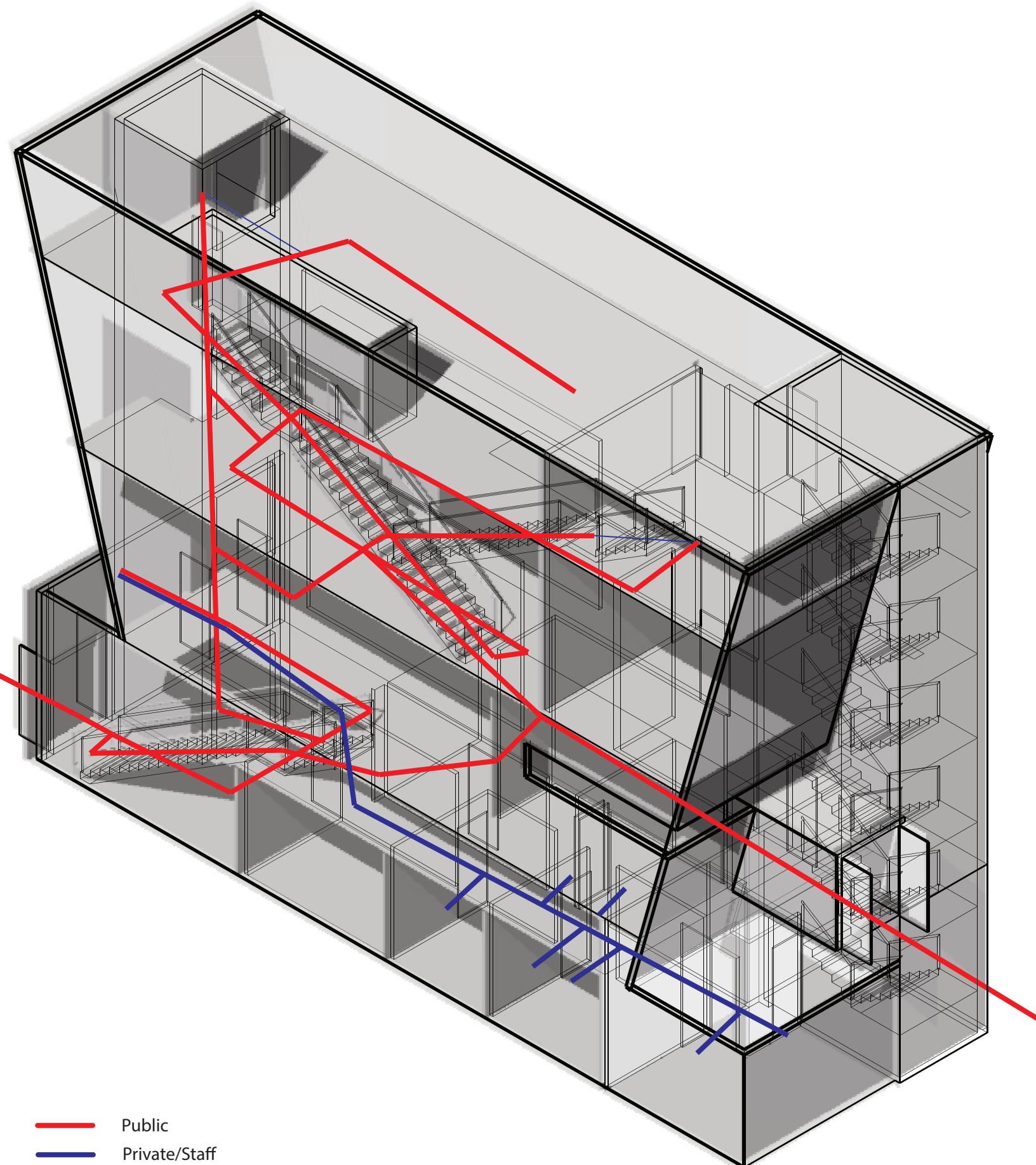
Scale 1/16"=1'

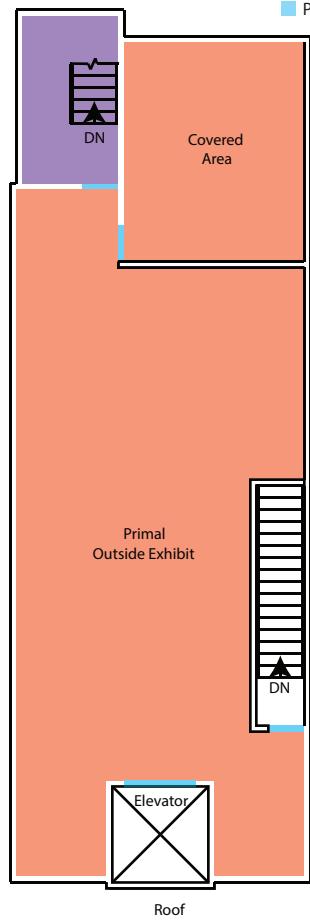
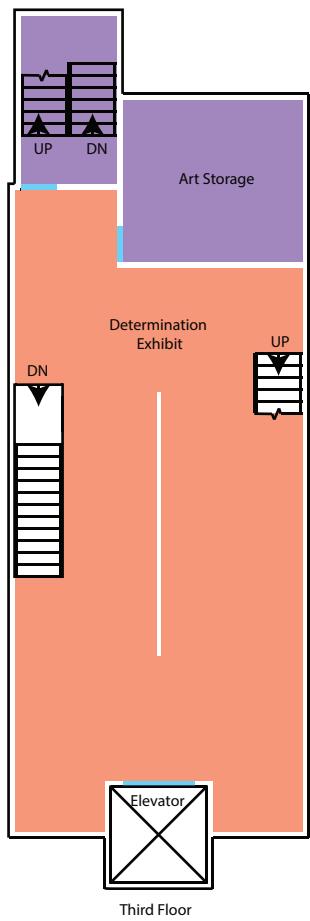
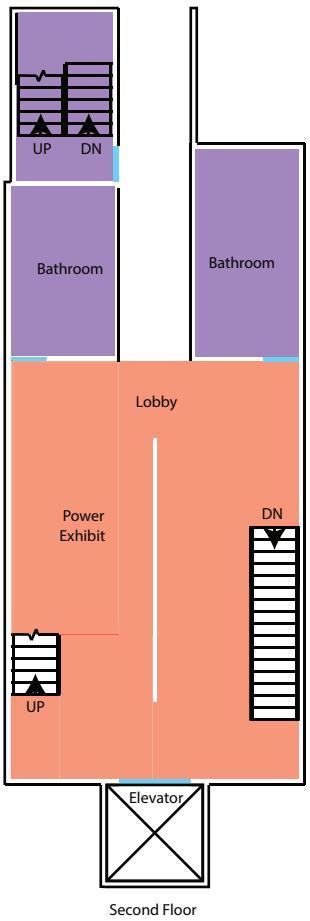
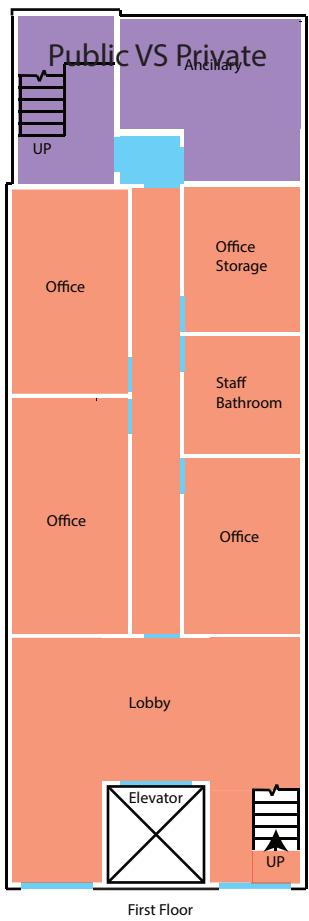
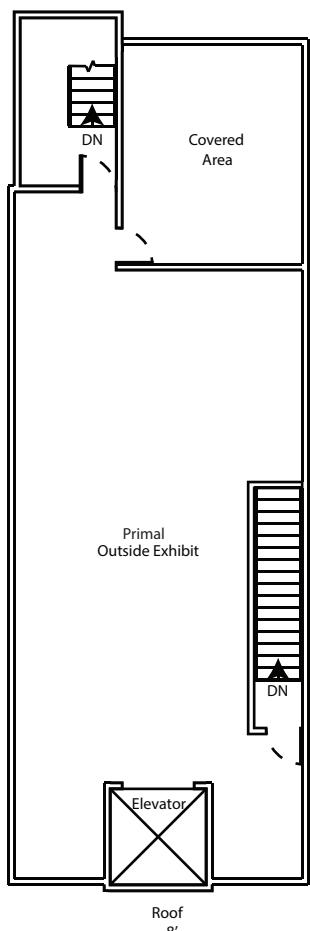
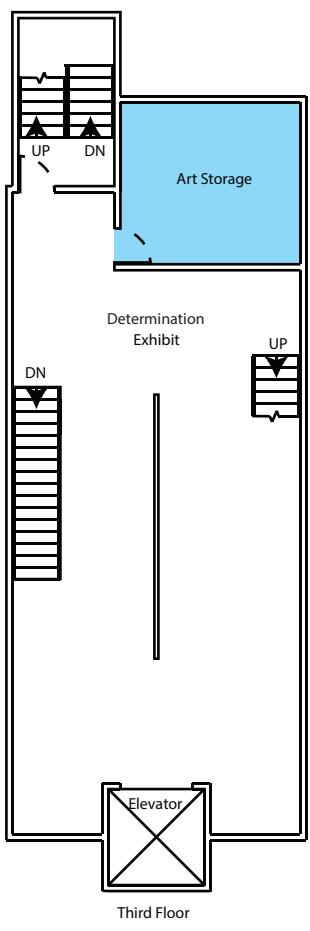
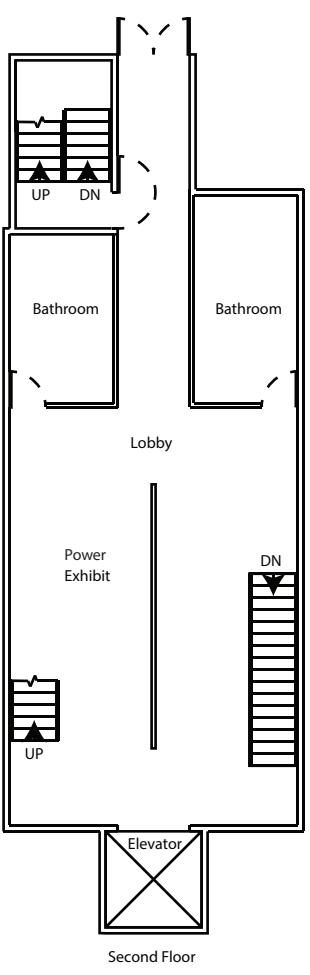
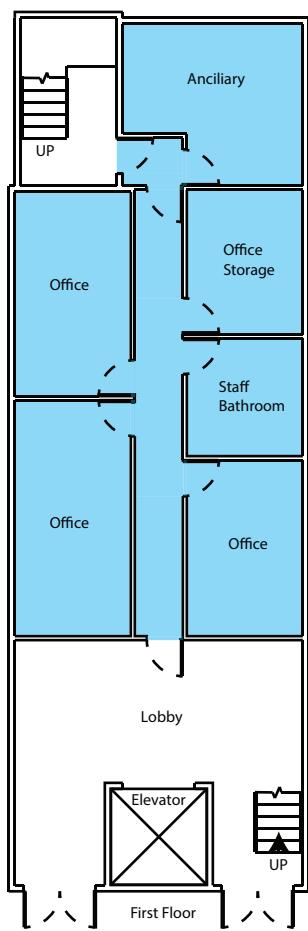
South

East

West

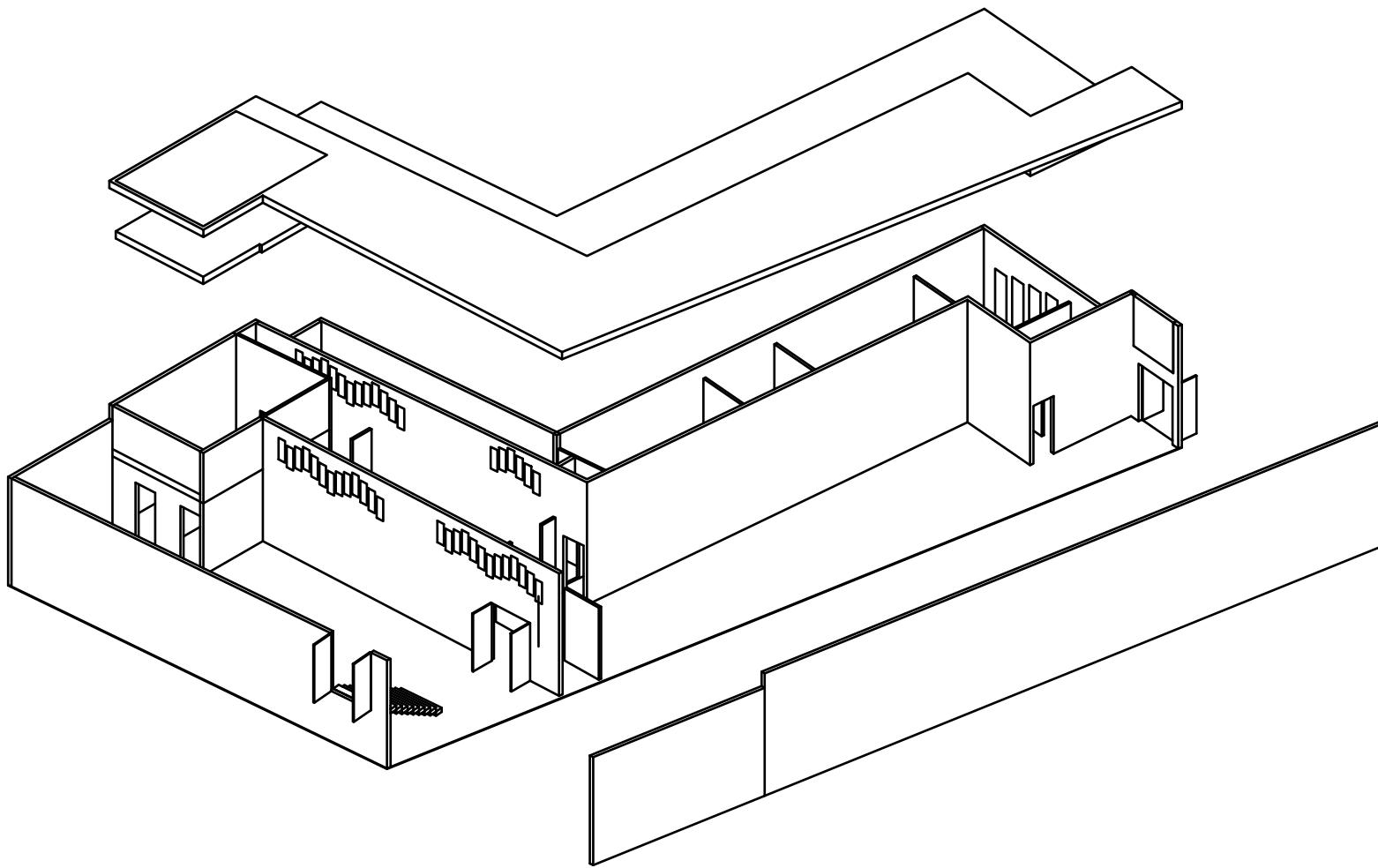
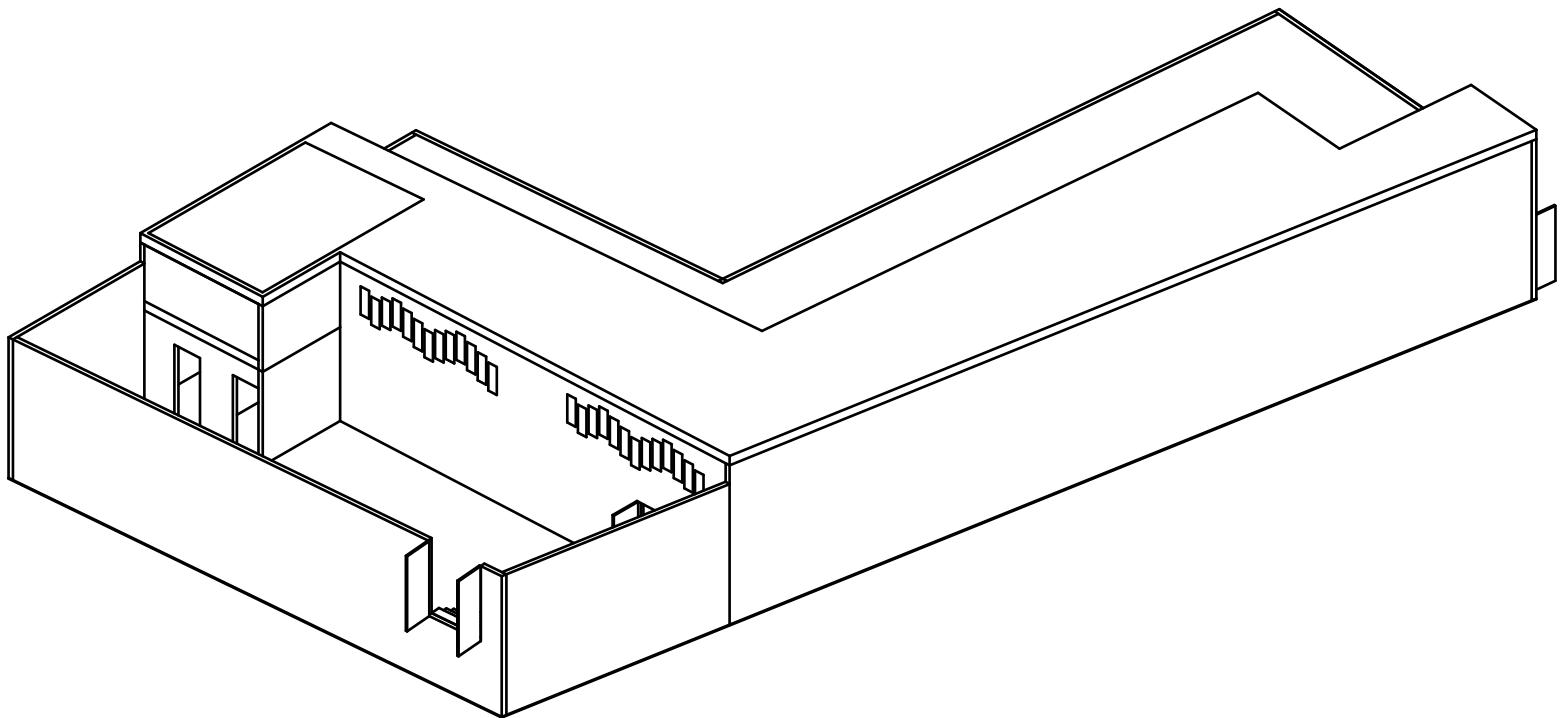
# Path Analysis



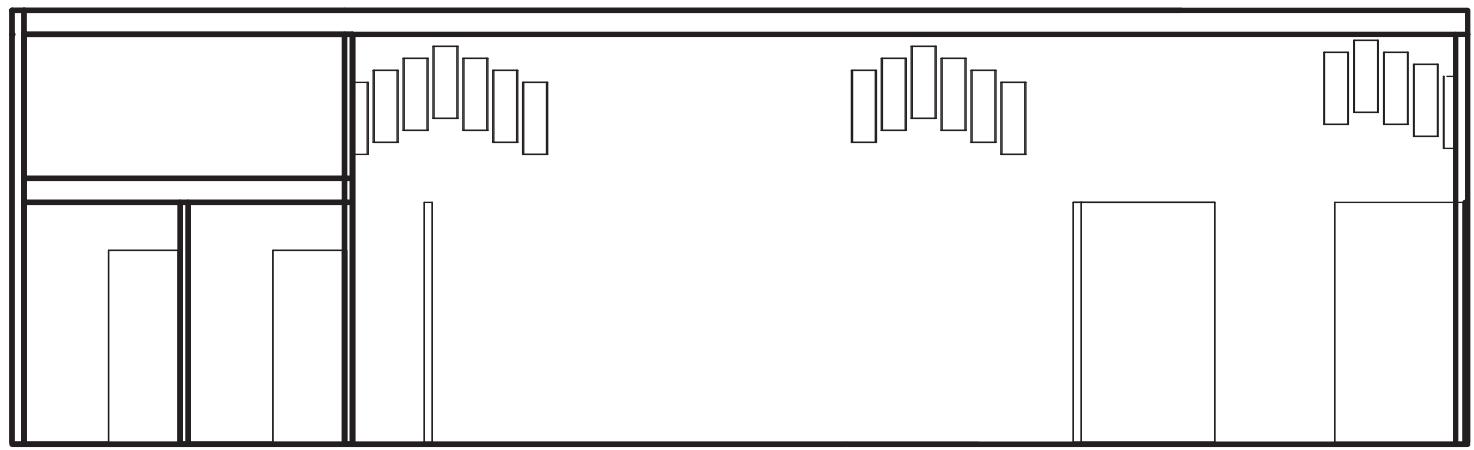
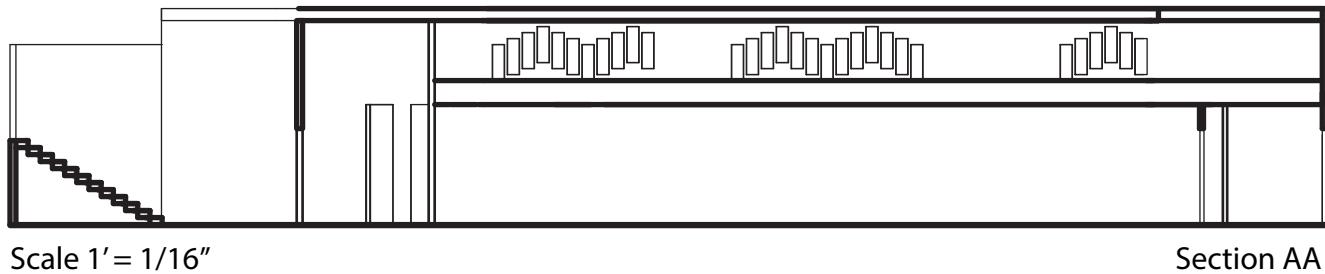
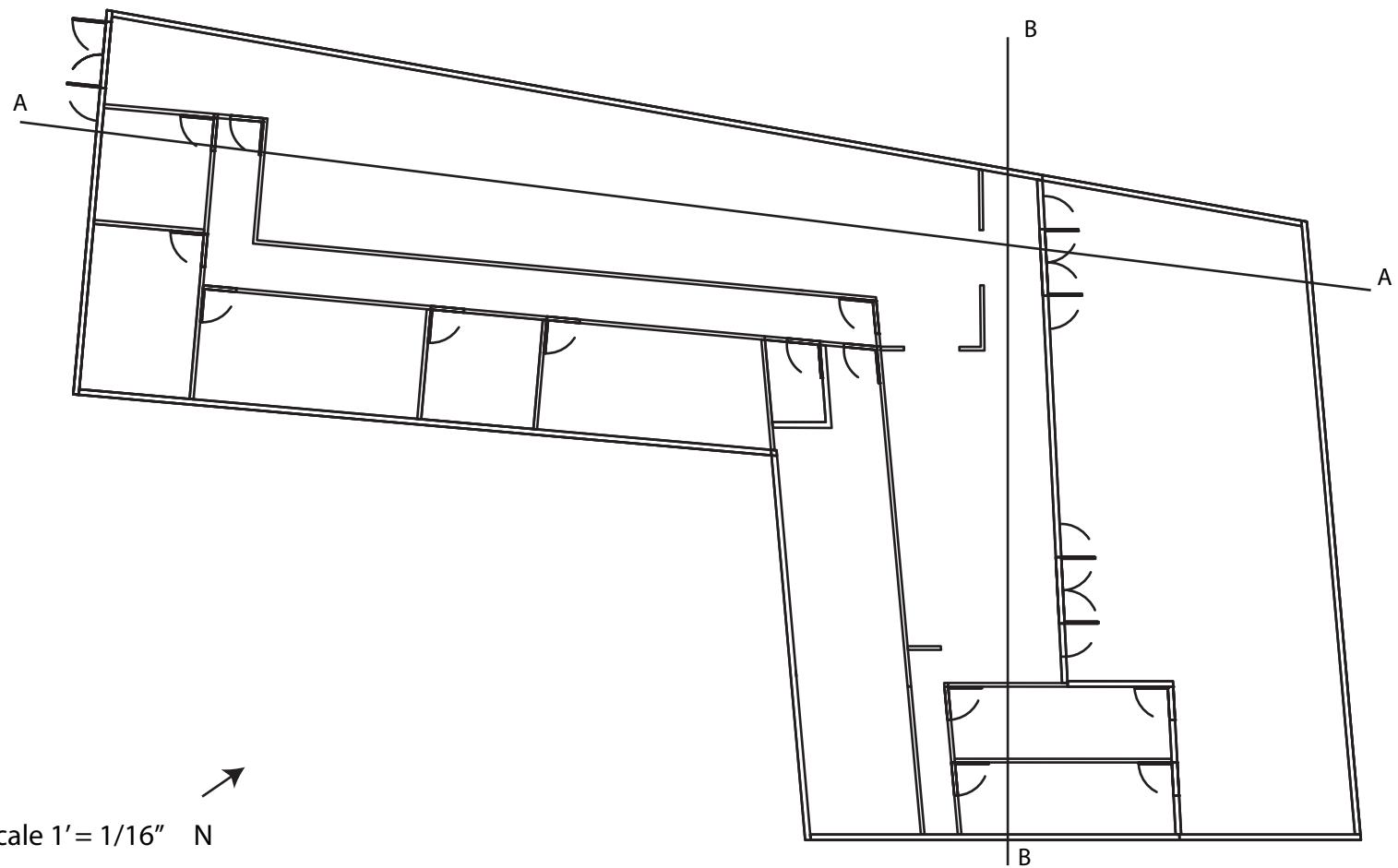


Studio 2: Lubbock Museum  
[Design in Rhino]

The design project was to design a museum located in Lubbock, TX.

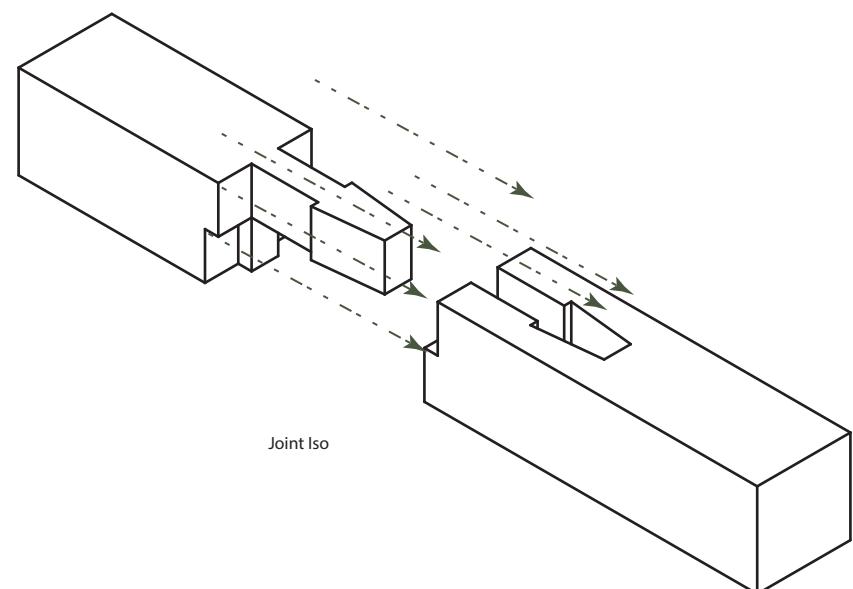
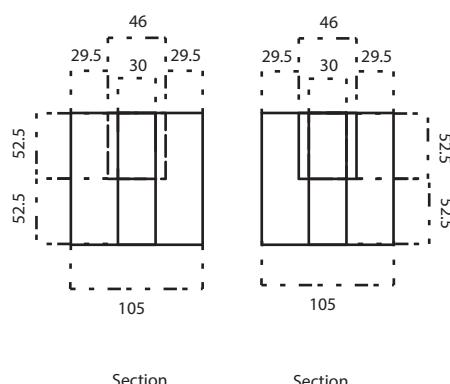
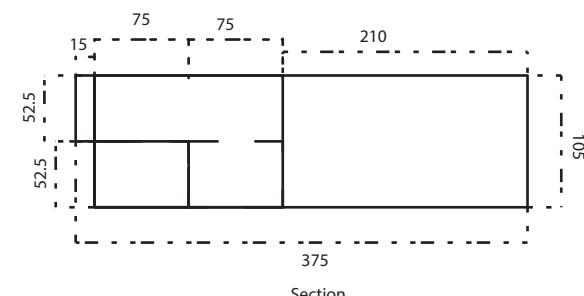
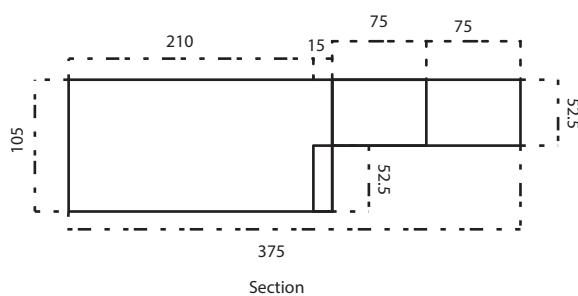
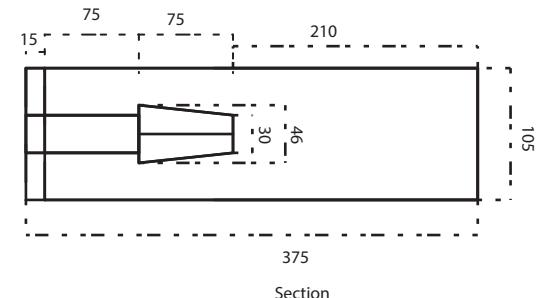
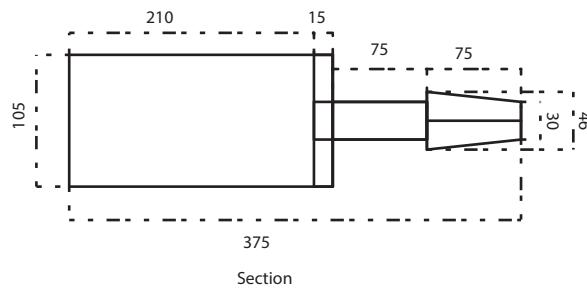


# Floor Plan



Scale 1' = 1/8"

Section BB





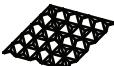
Solids and Voids



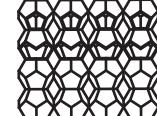
Solids and Voids



Solids and Voids



Solids and Voids



Voids



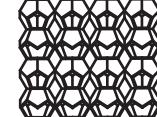
Voids



Voids



Voids



Solids



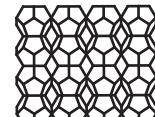
Solids



Solids



Solids



Polyhedron Pattern



Box



Polyhedron Pattern



Box



Polyhedron Pattern



Box



Boolean Difference



Boolean Union



Boolean Difference



Boolean Difference



Polyhedron Pattern



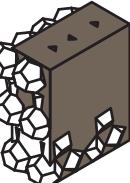
Box



Boolean Difference



Boolean Union



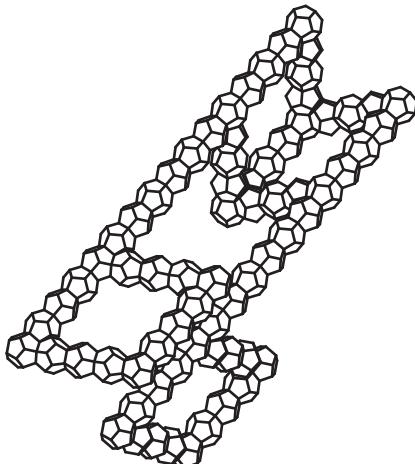
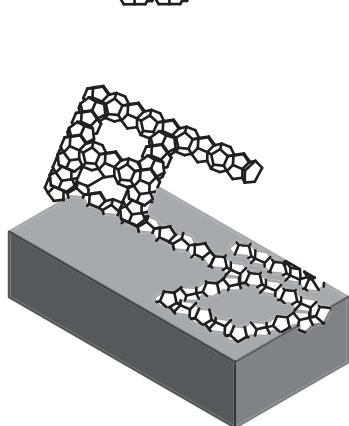
Boolean Union



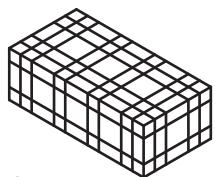
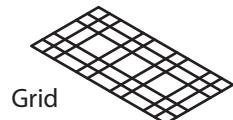
Boolean Union



Clusters

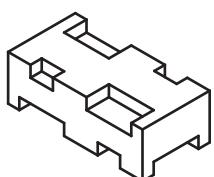
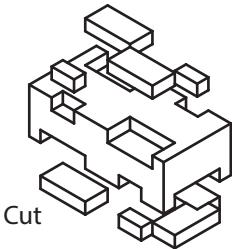


Step One

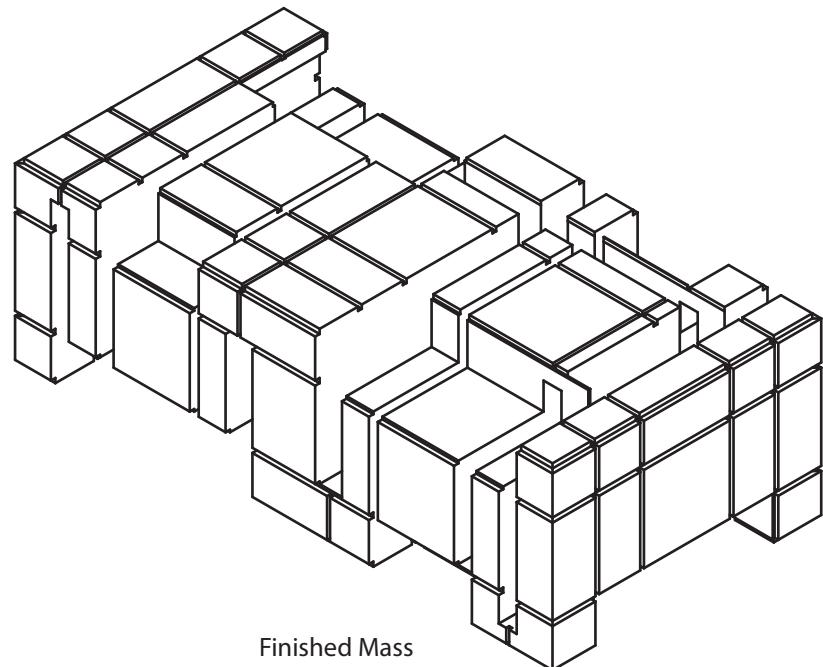


Projected Grid

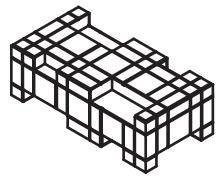
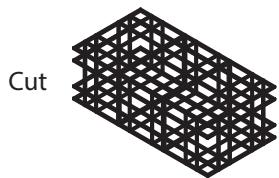
Step Two



After Cut



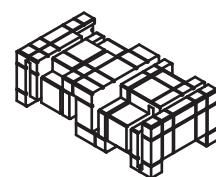
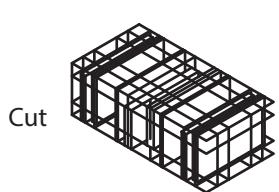
Step Three



After Cut

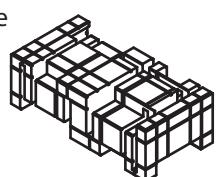
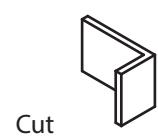
Finished Mass

Step Four



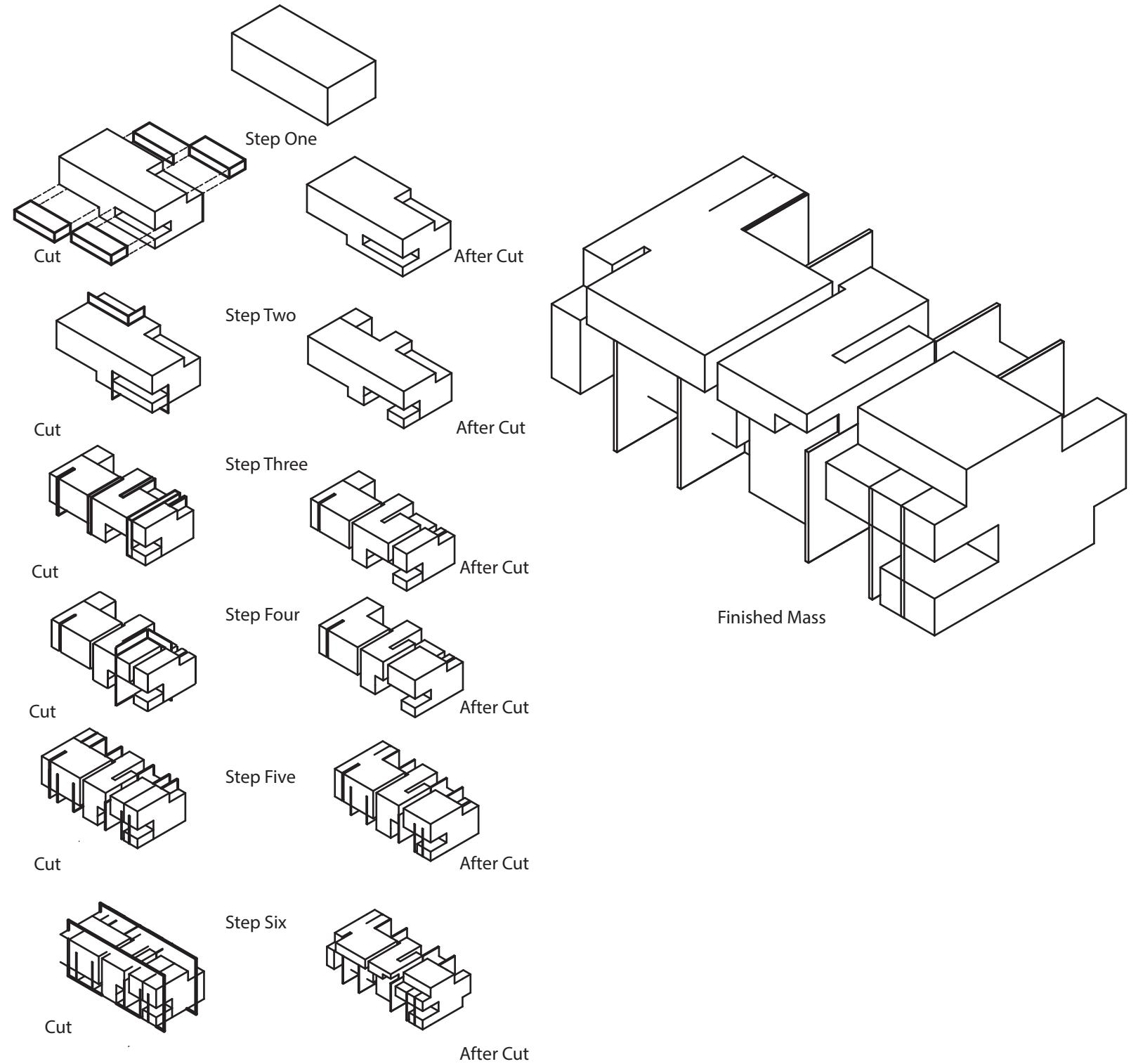
After Cut

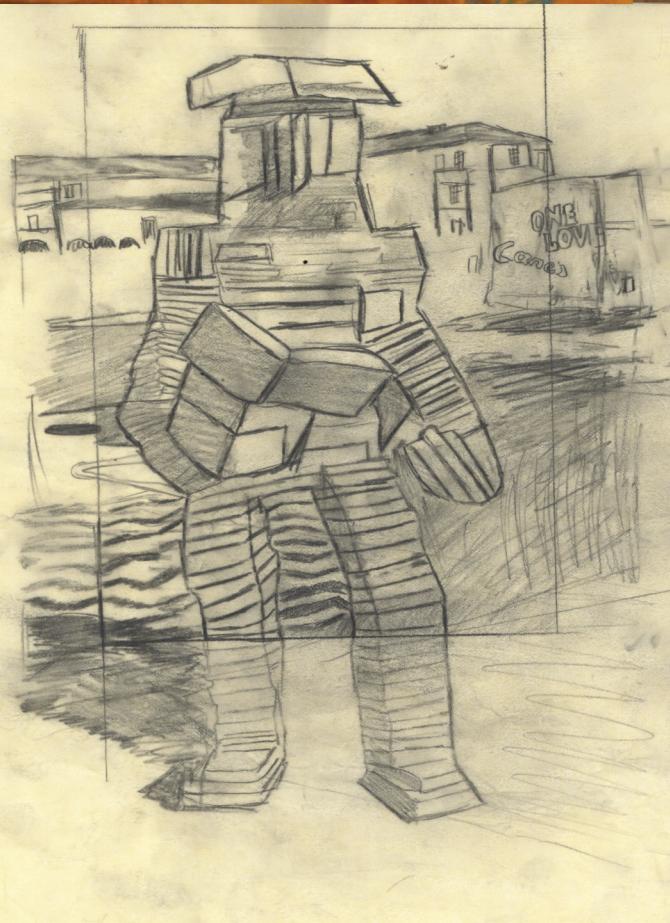
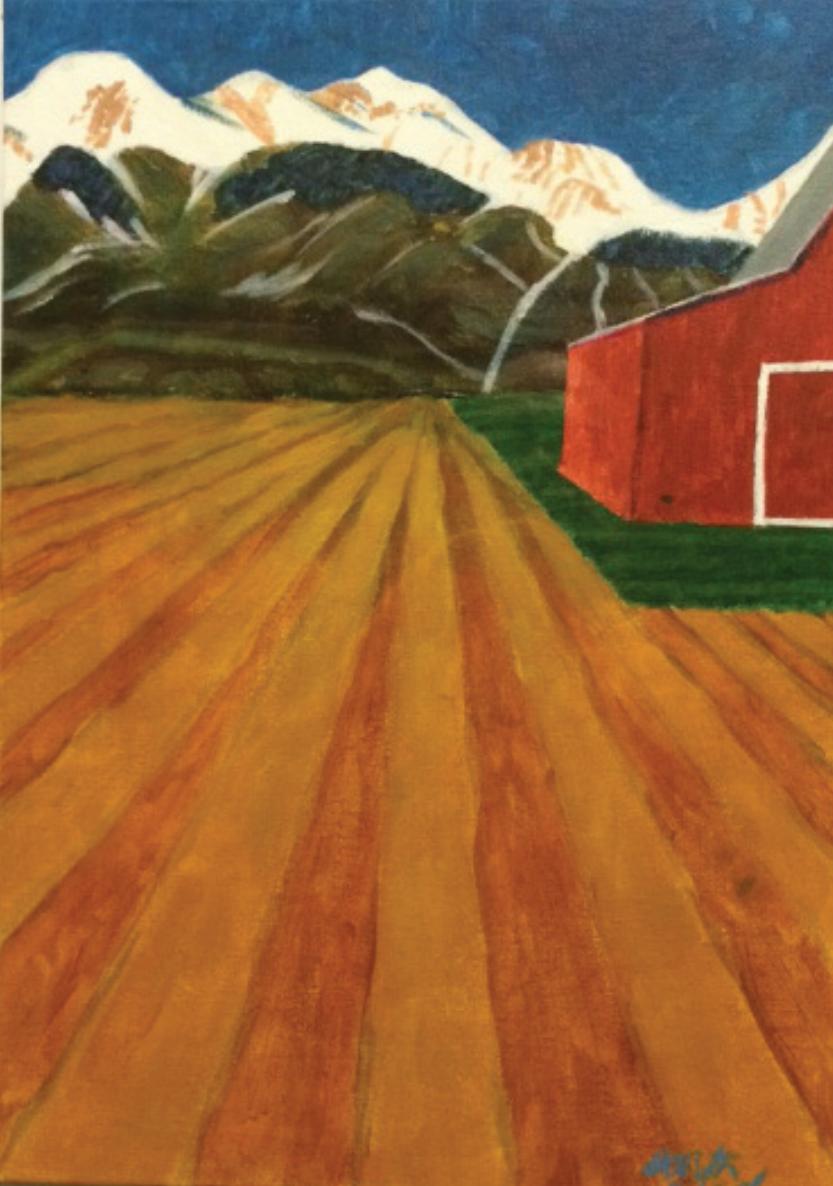
Step Five



After Cut

Finished Mass





The desk I designed and then fabricated for personal use. The desk is fabricated out of granite, steel tubing, glass, and oak. Some of the materials were found and reused materials.

The second personal project is a design for the backyard patio of my father's house. It is bar seating on the top part with seating on the bottom around an open air where a fire pit will be placed.



