



Undergraduate Portfolio
BY: Garth Nicol

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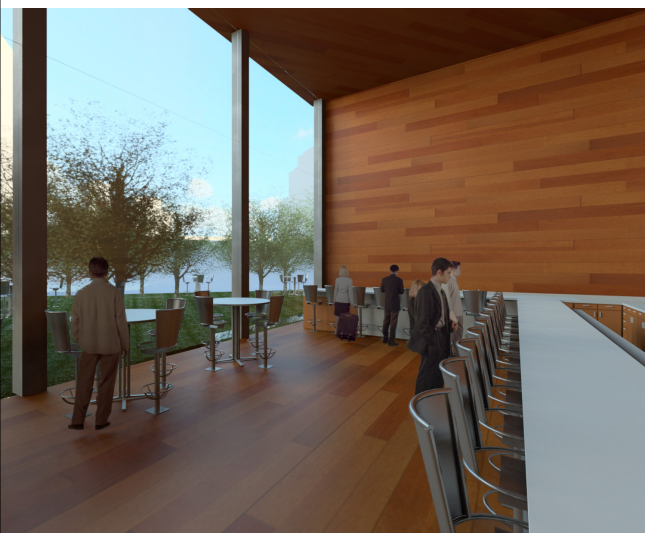
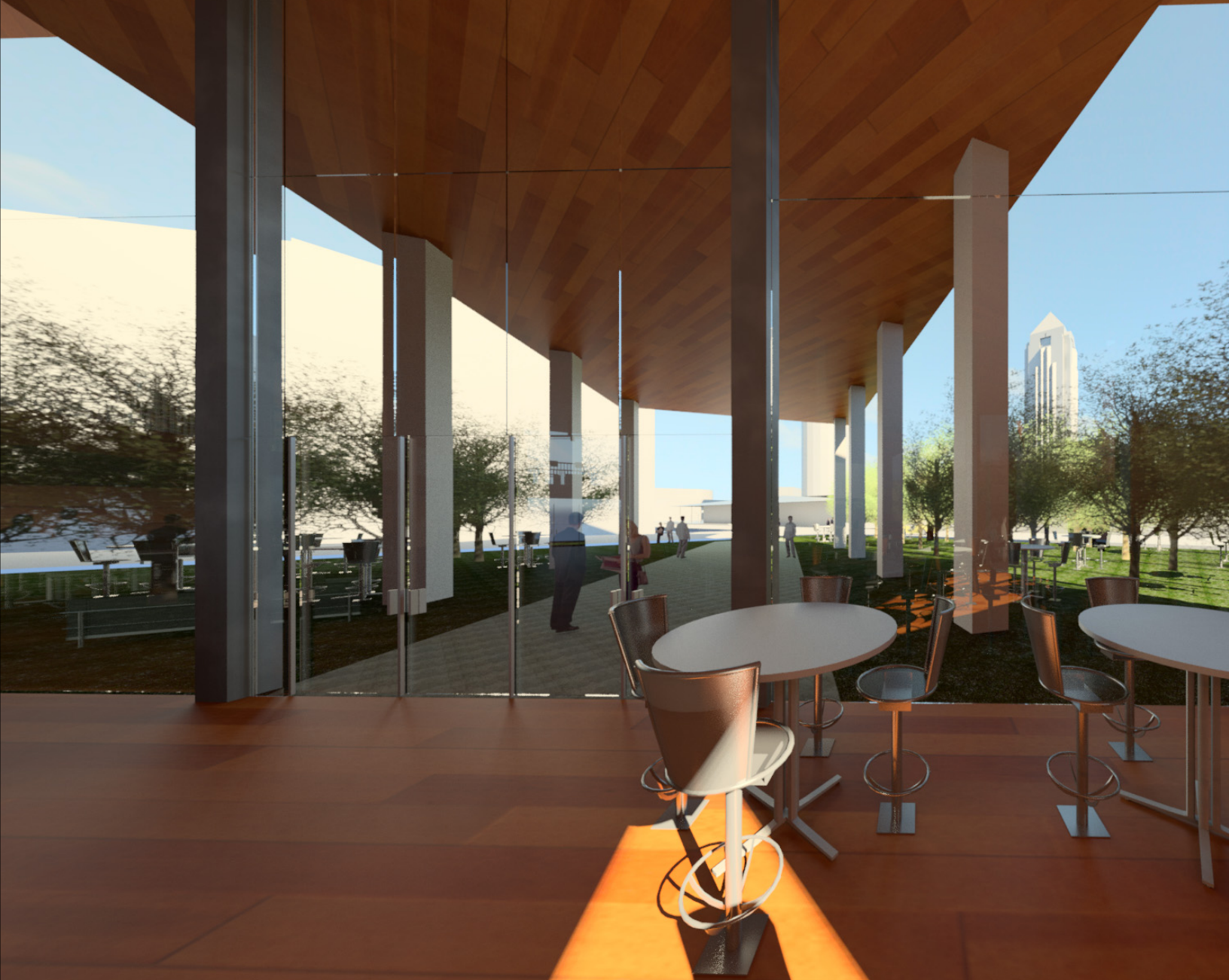
Personal Design Projects

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 then go back to the hotel and feel like you're not in the city anymore.

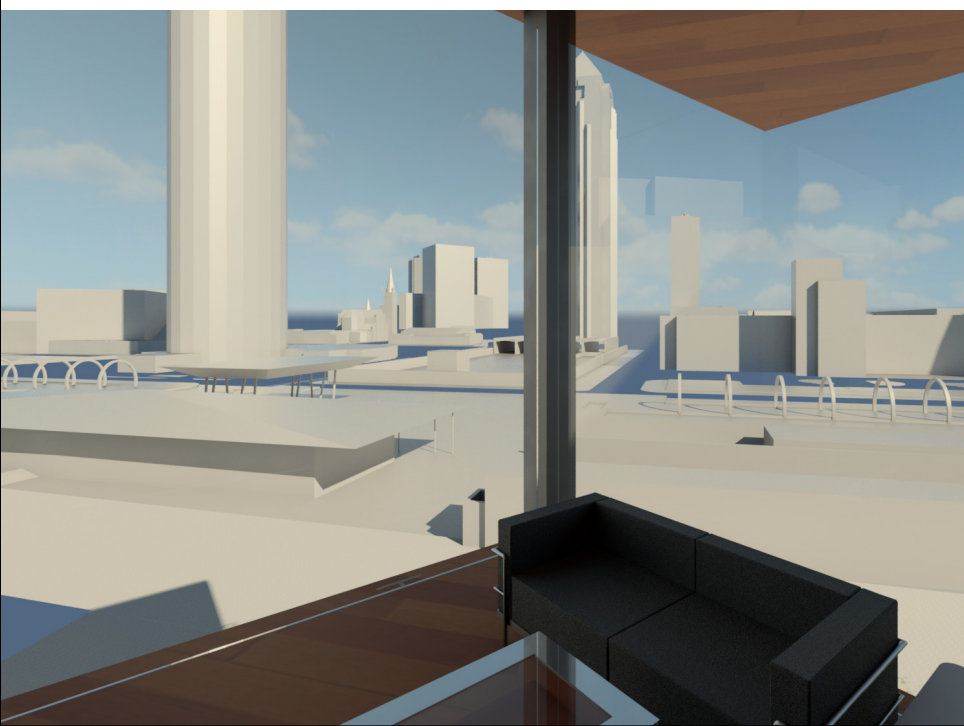
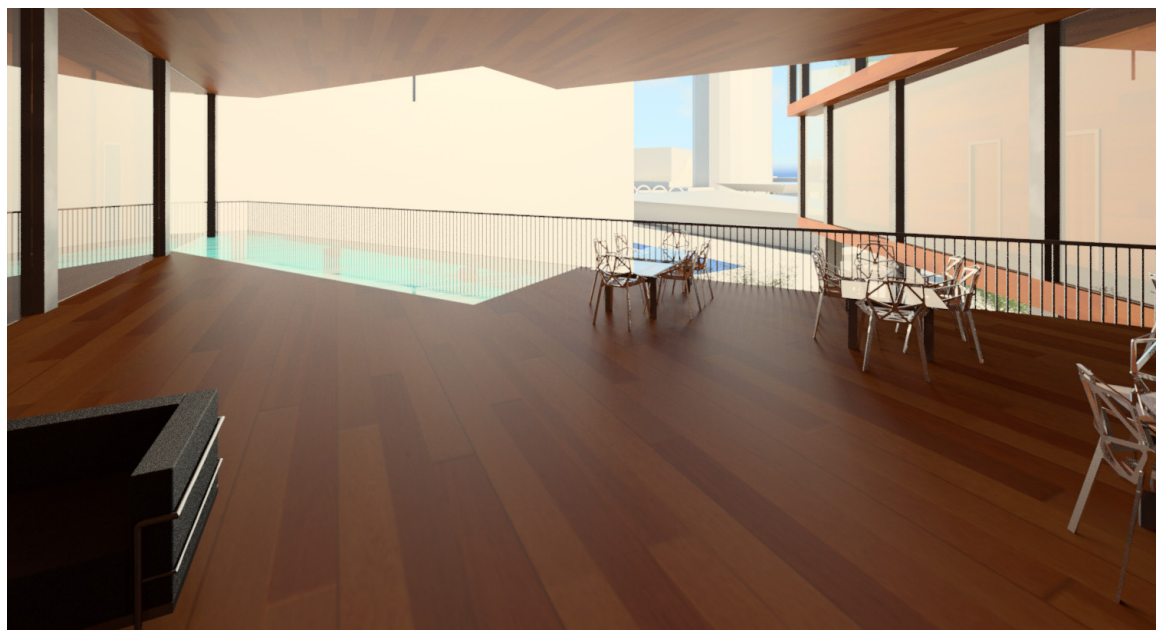




Ground Floor Pictures



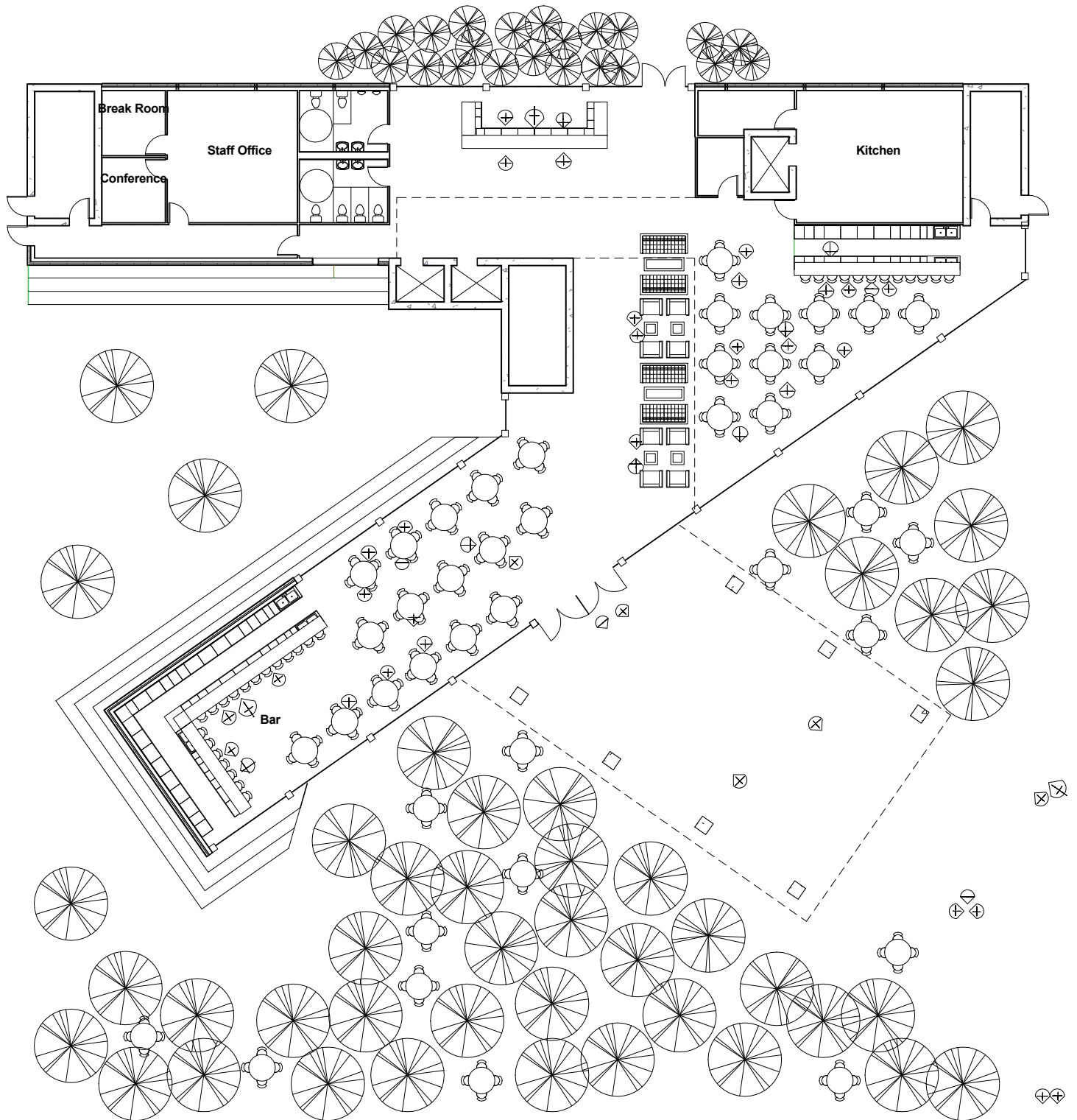
Ground Floor Pictures





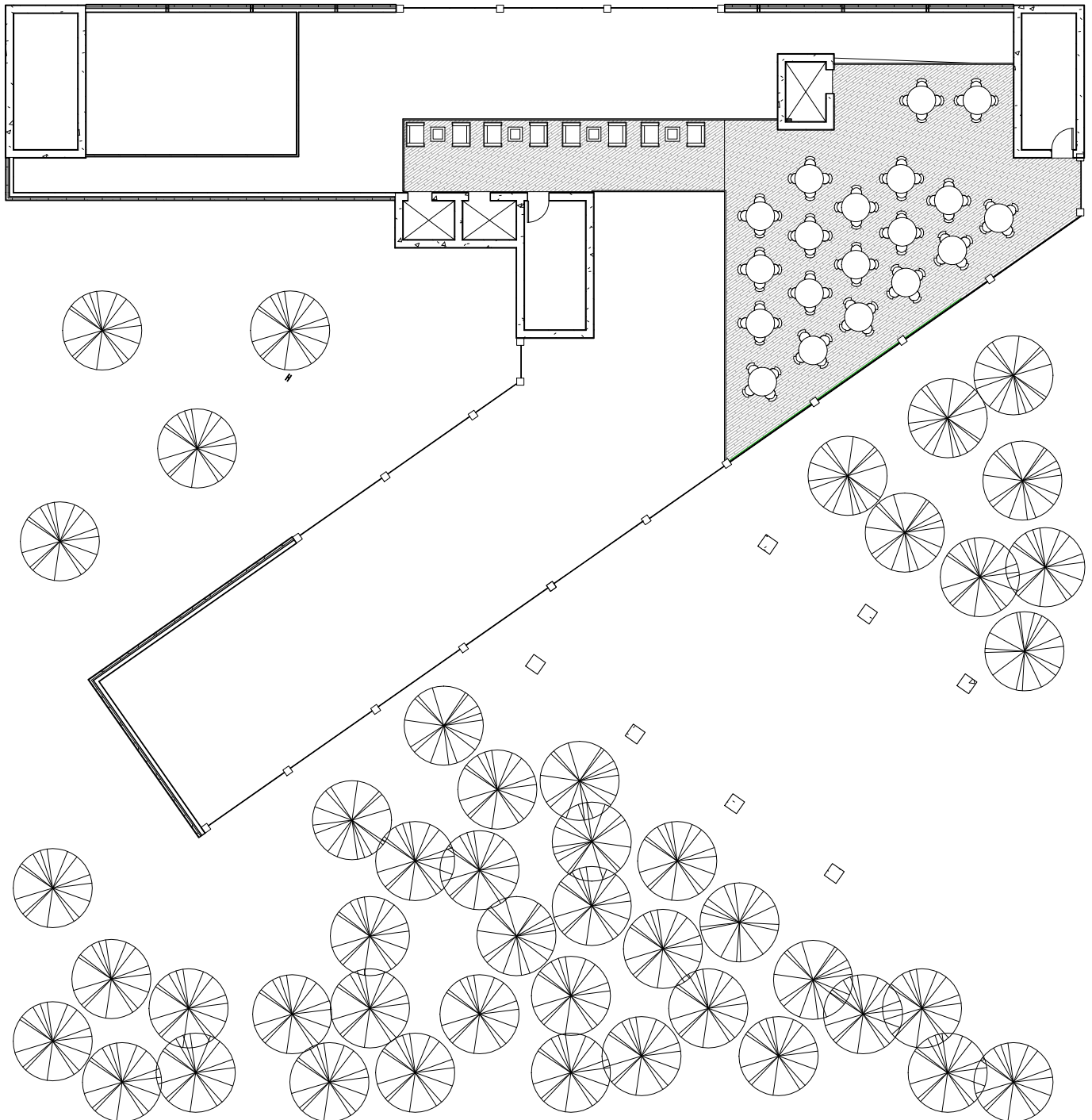






1

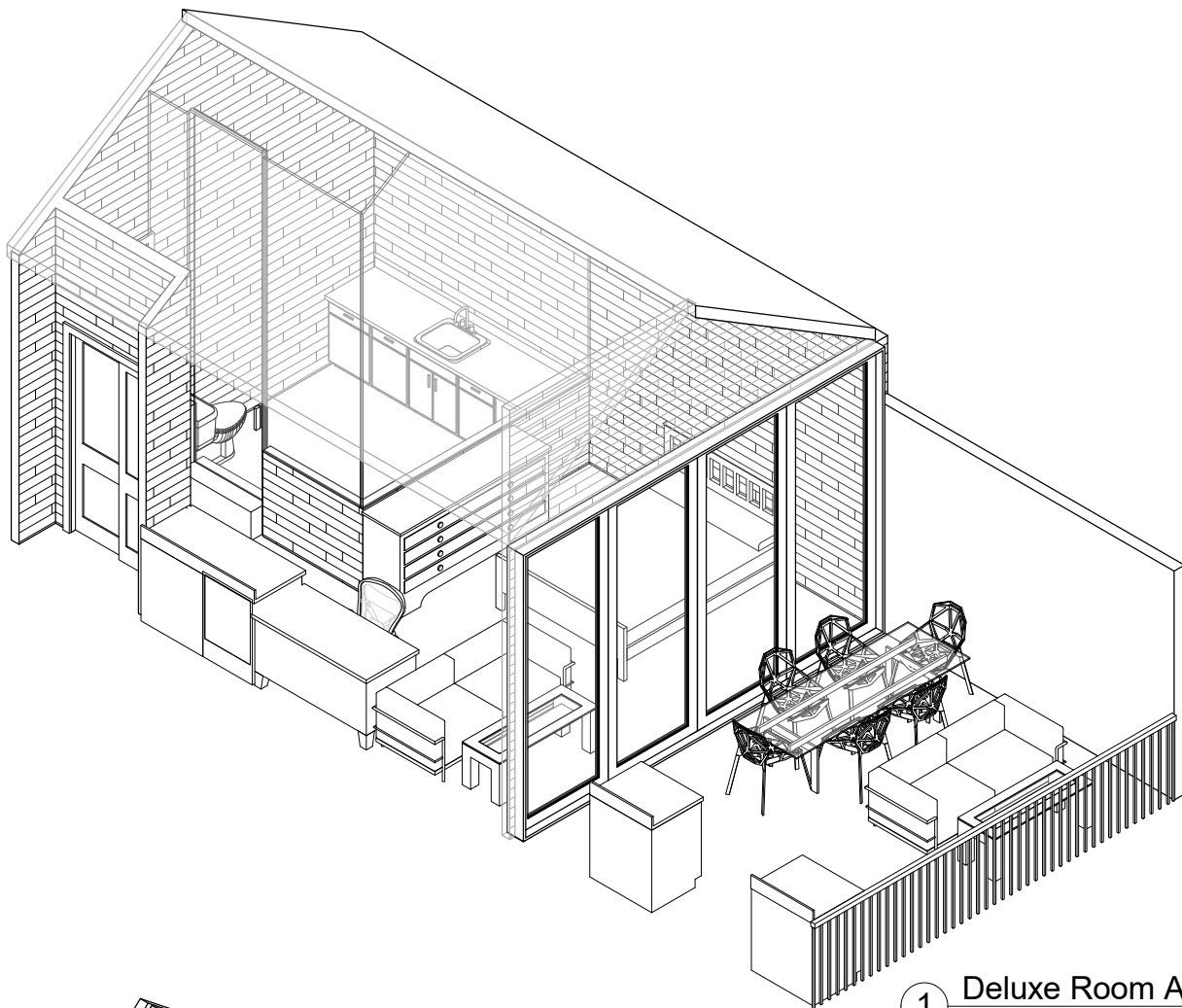
Ground Floor
3/64" = 1'-0"



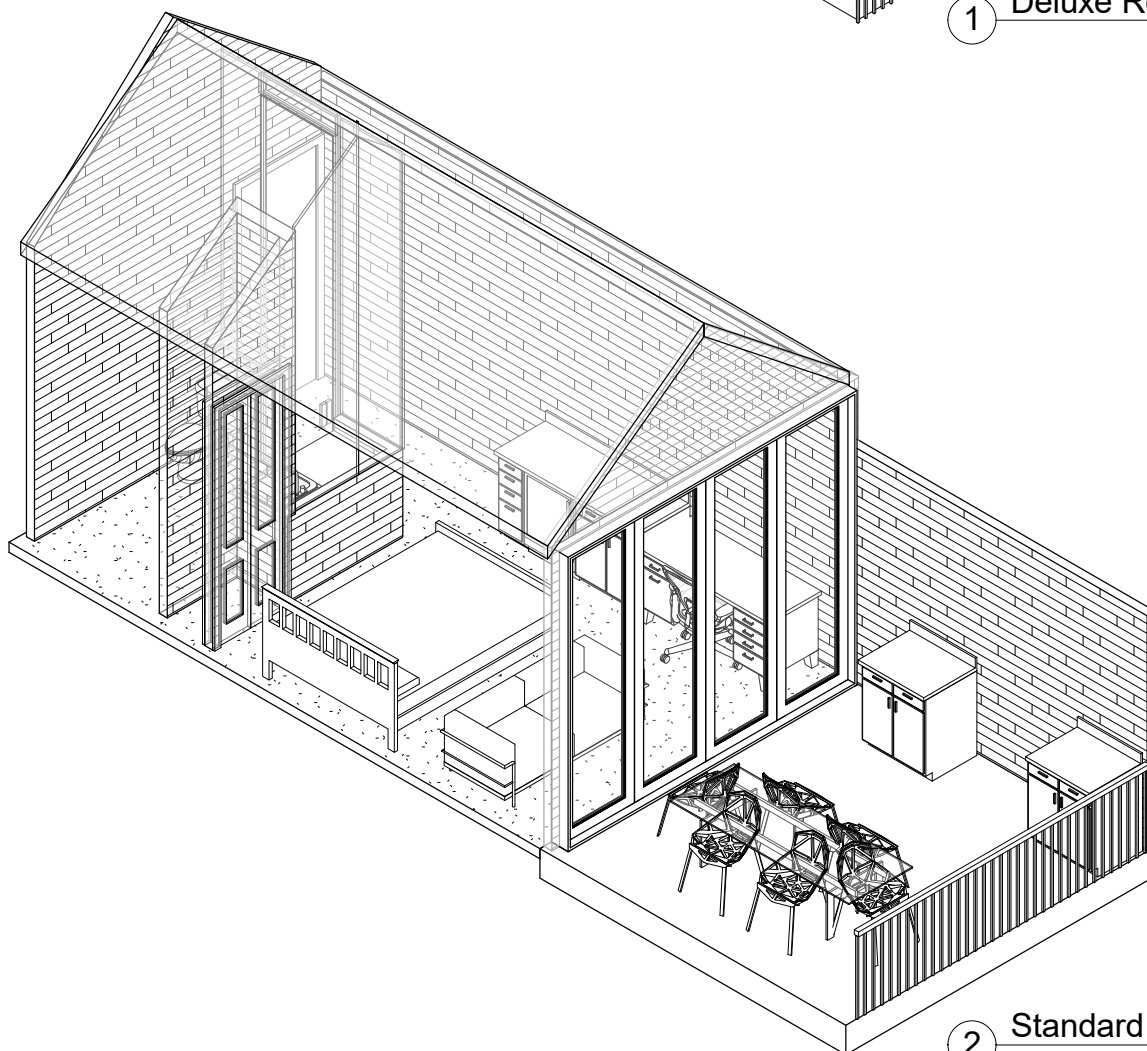


1 Level 2 & 4 Floor Plan with Structural Grid
3/64" = 1'-0"

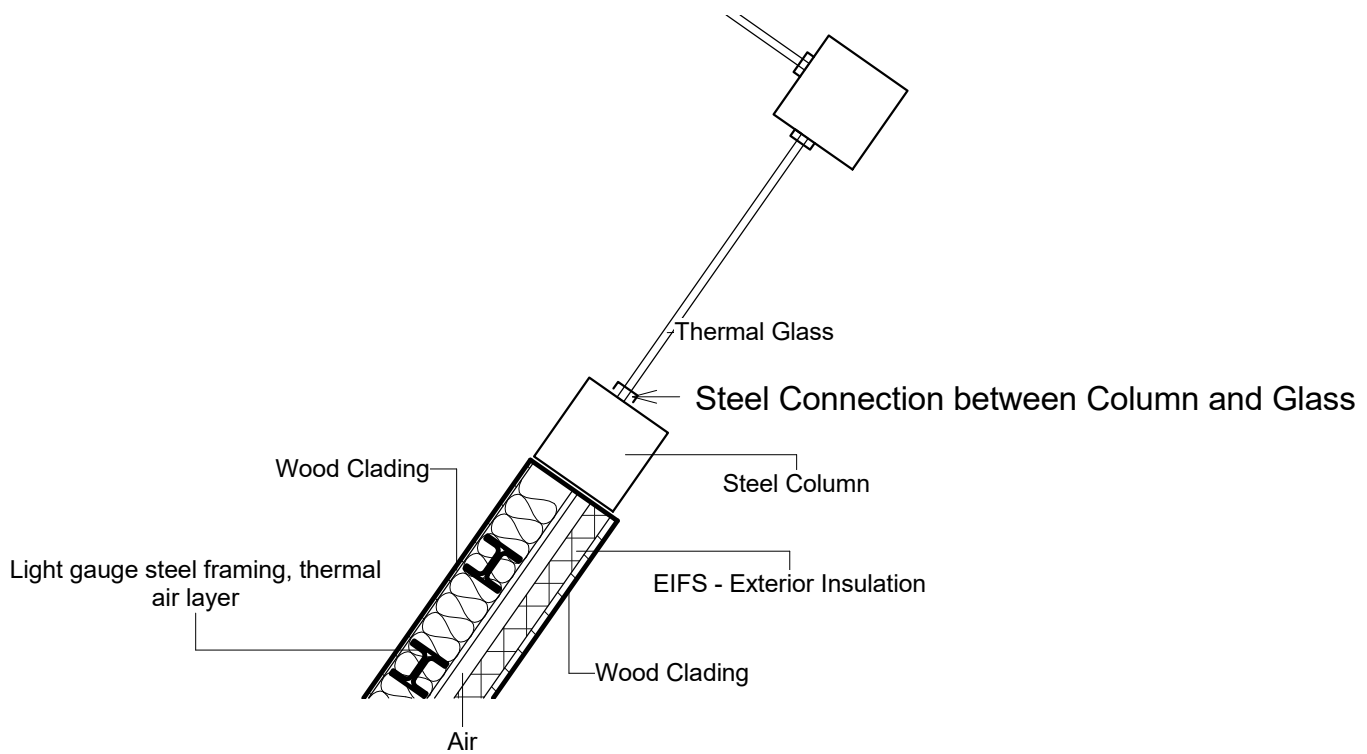




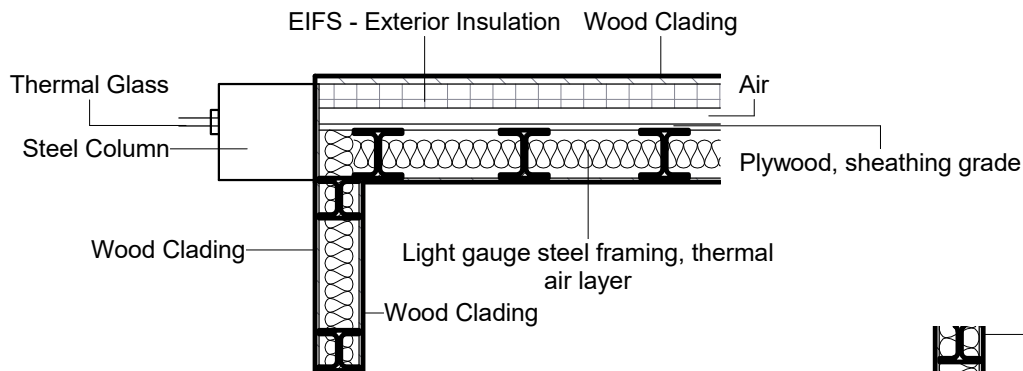
1 Deluxe Room Axo



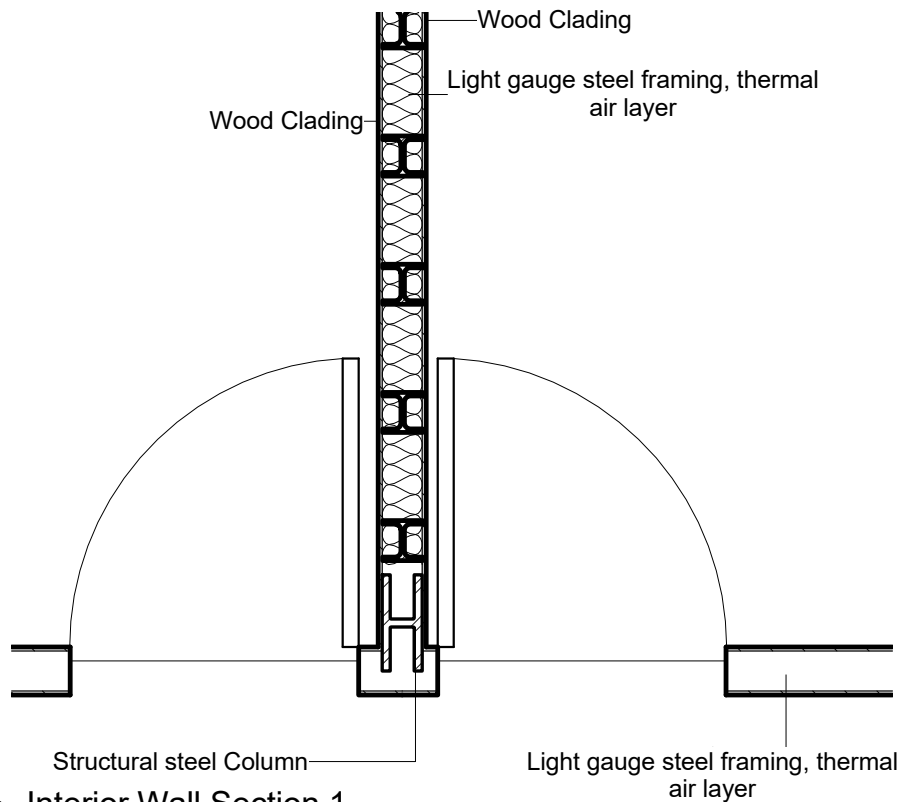
2 Standard Room Axo



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



② Exterior Wall Detail
1/2" = 1'-0"



③ Interior Wall Section 1
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.

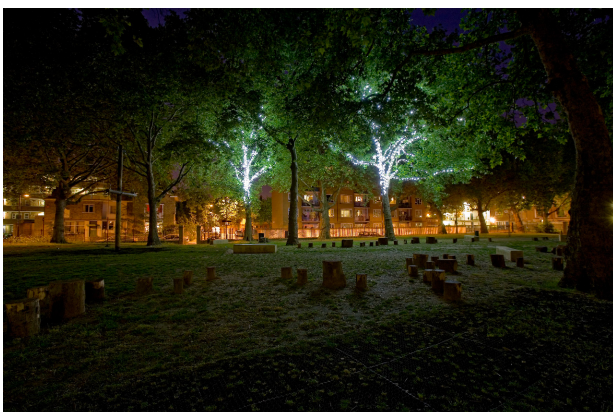
Plaza Pumarejo Narrative

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

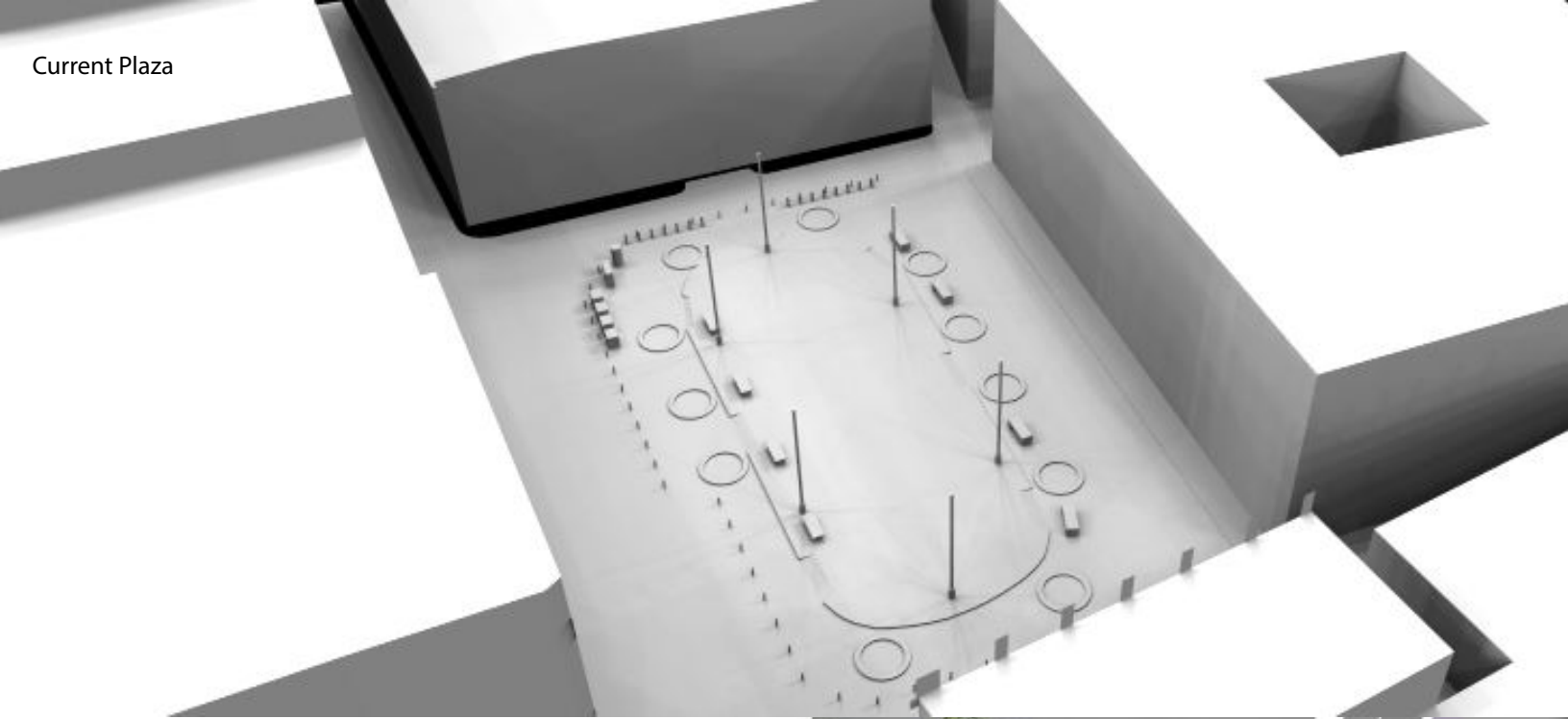
New Kiosk designed with two tiled mosaic sides that recall the historical use of tile in Spain.

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

Plaza Pumarejo Redesigned



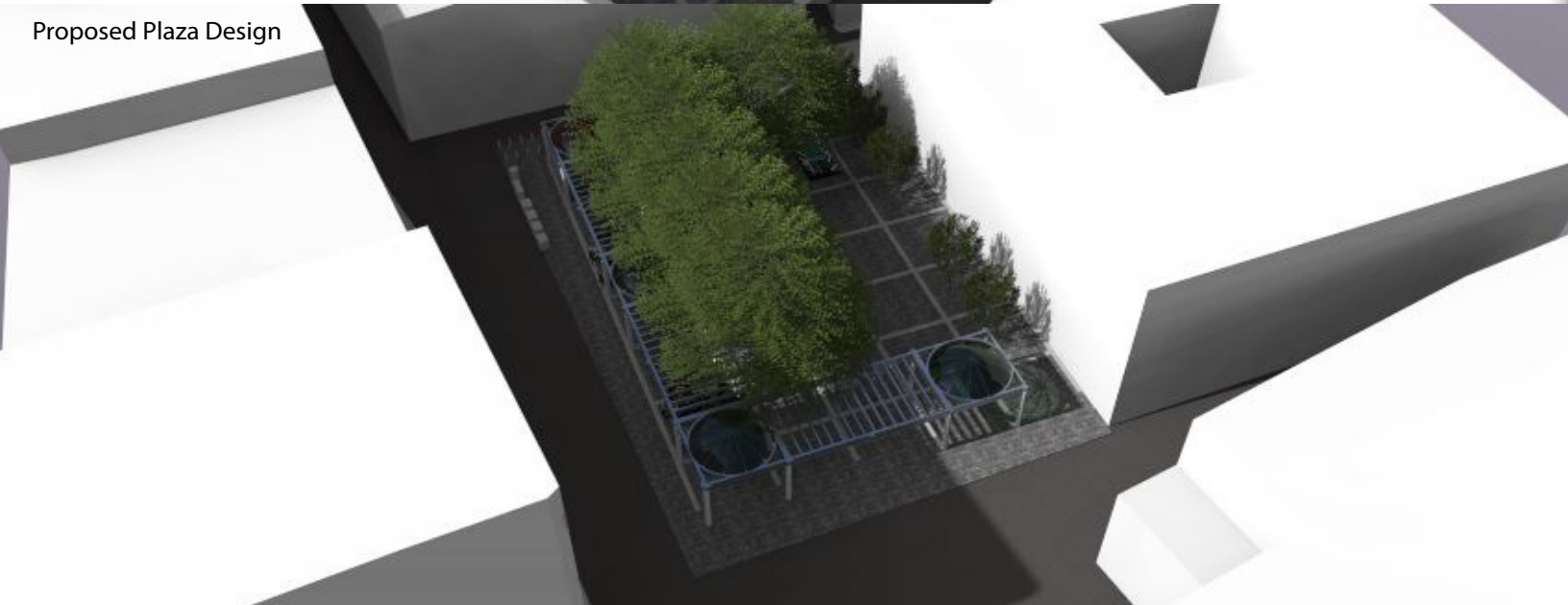
Current Plaza

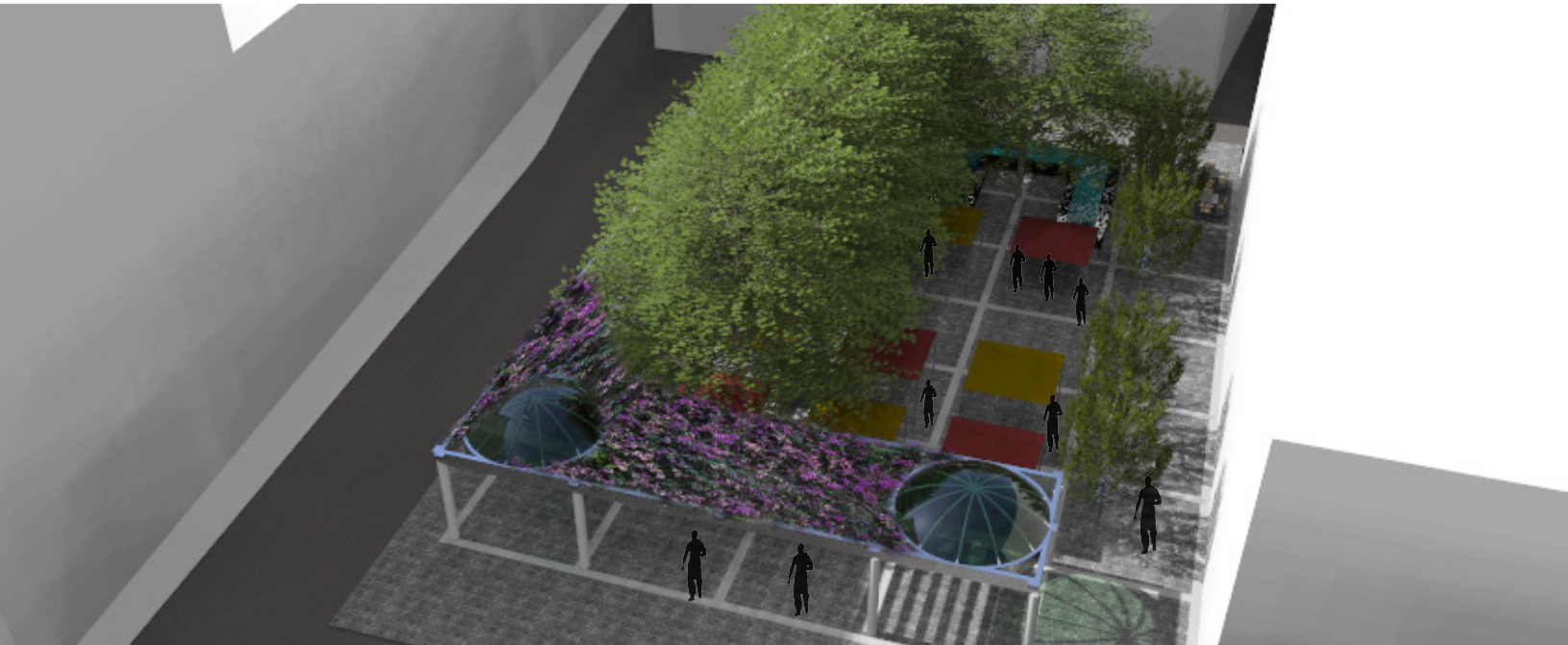


Proposed Plaza Design



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.

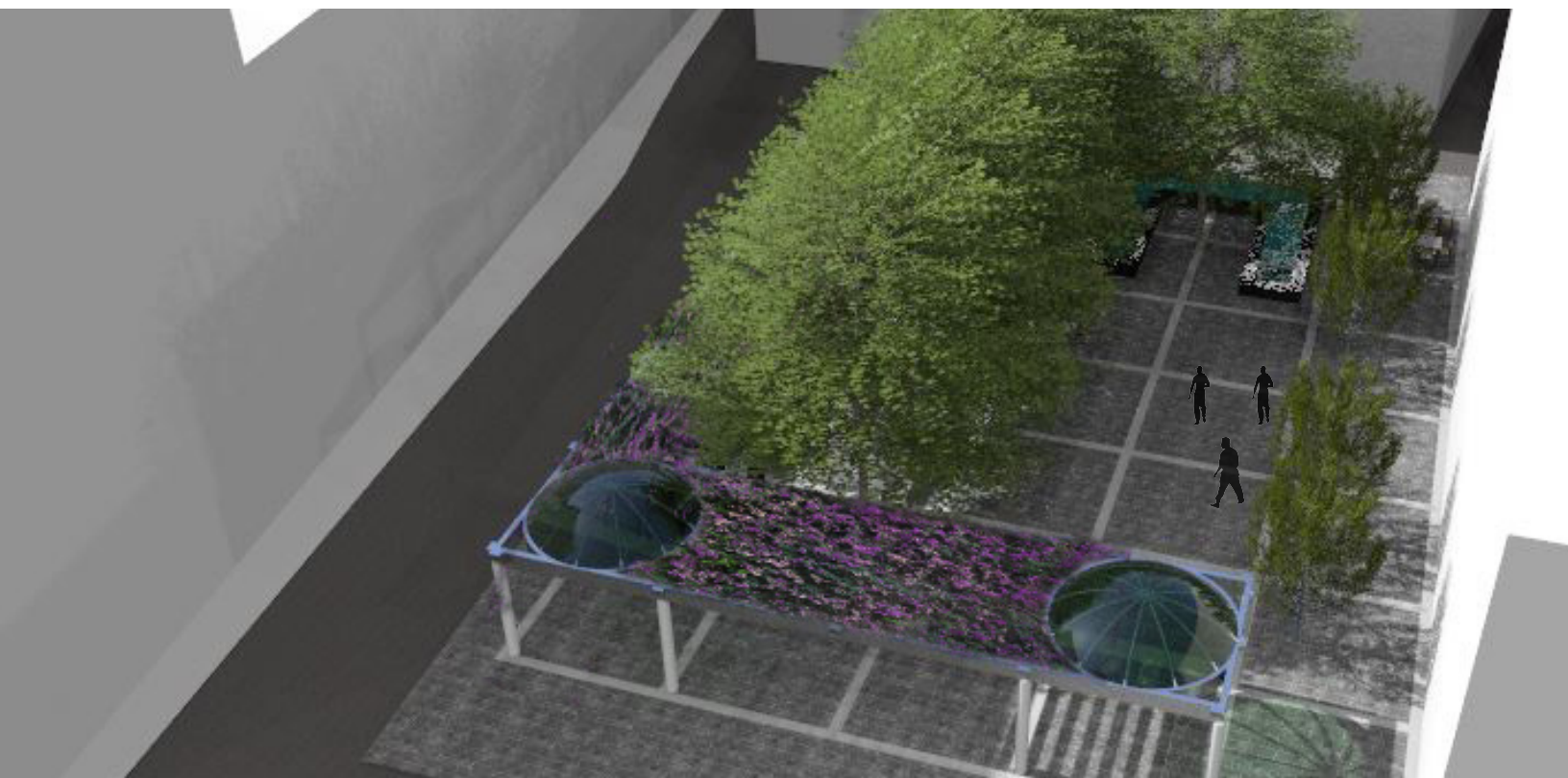
Plaza can be used as an open multiuse space including allowing the use of tents for markets.

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

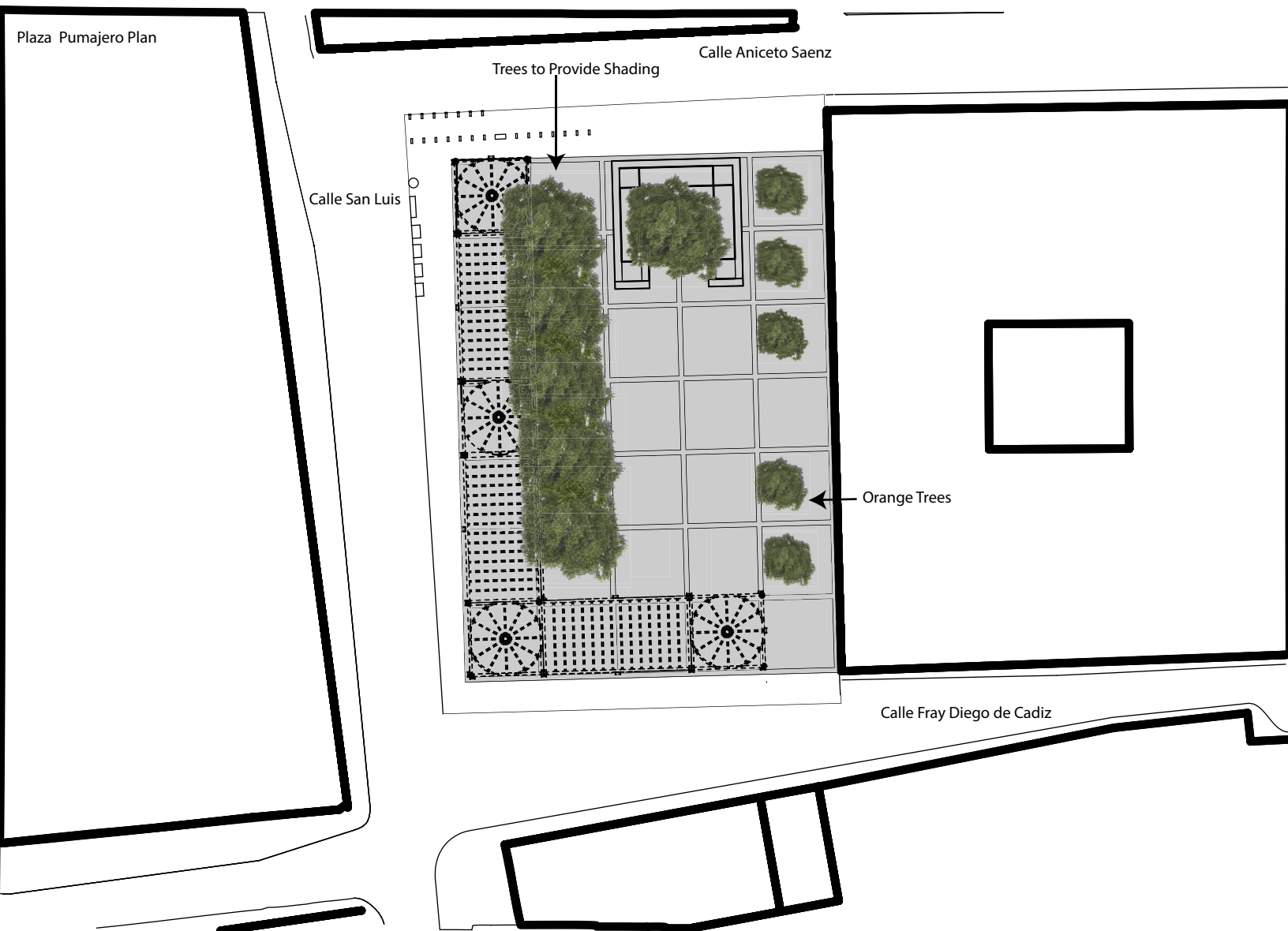
Shade provided by row of trees.

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

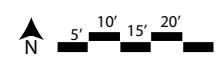
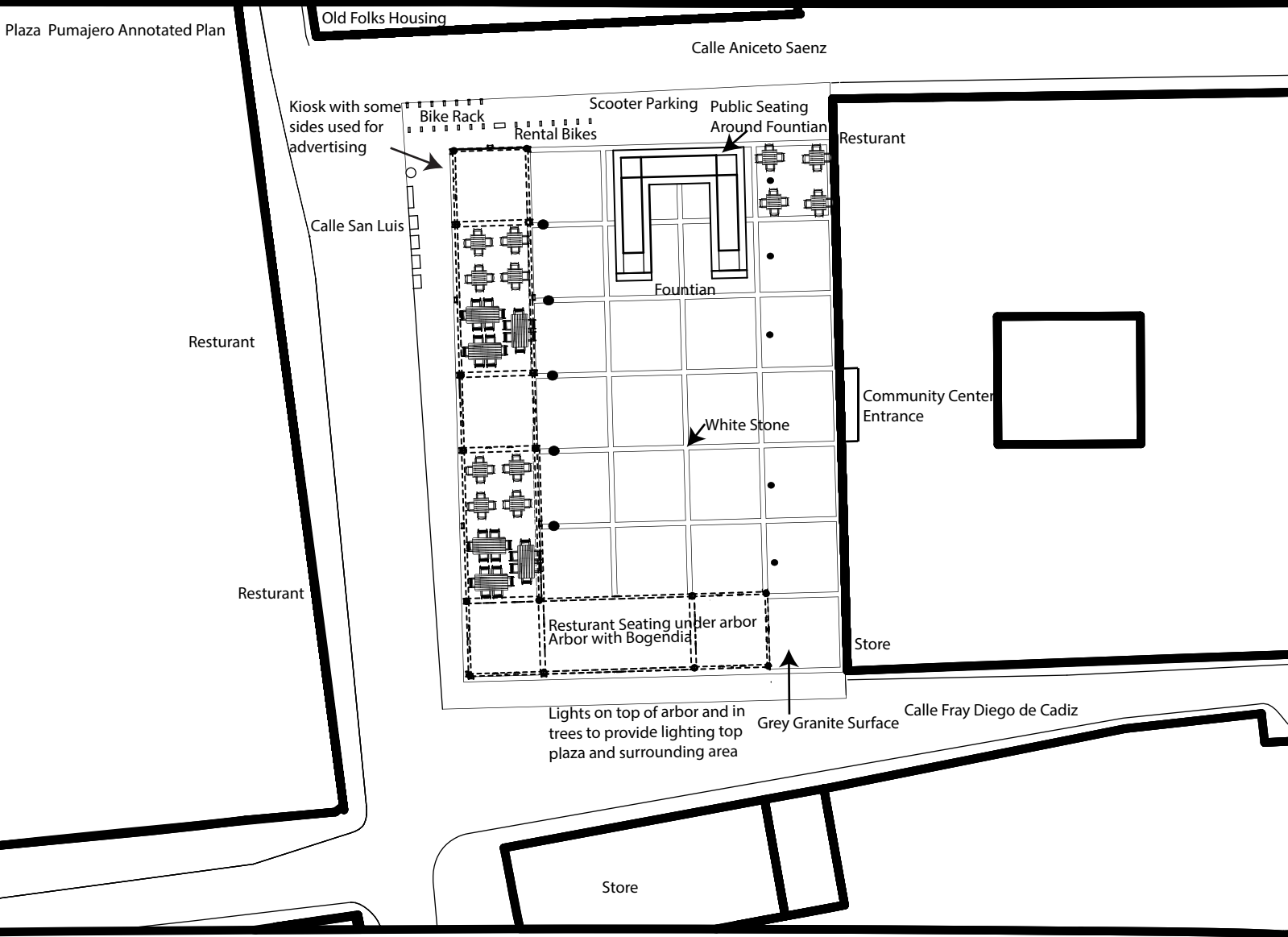
The grid on the ground shows of the organizing feature of the plaza and can even be used to divide up spaces into different events if called for.

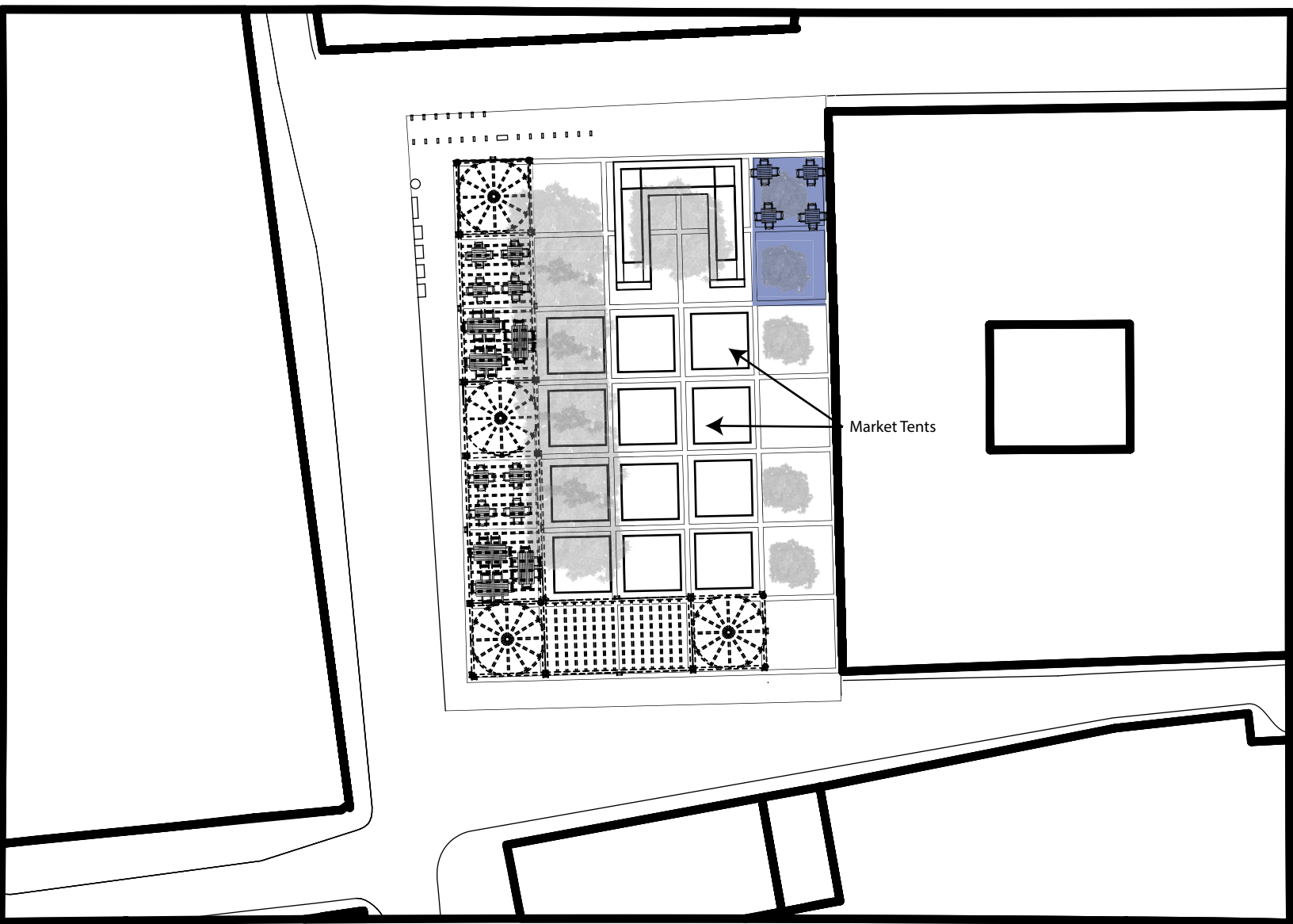






Plaza Pumajero Annotated Plan

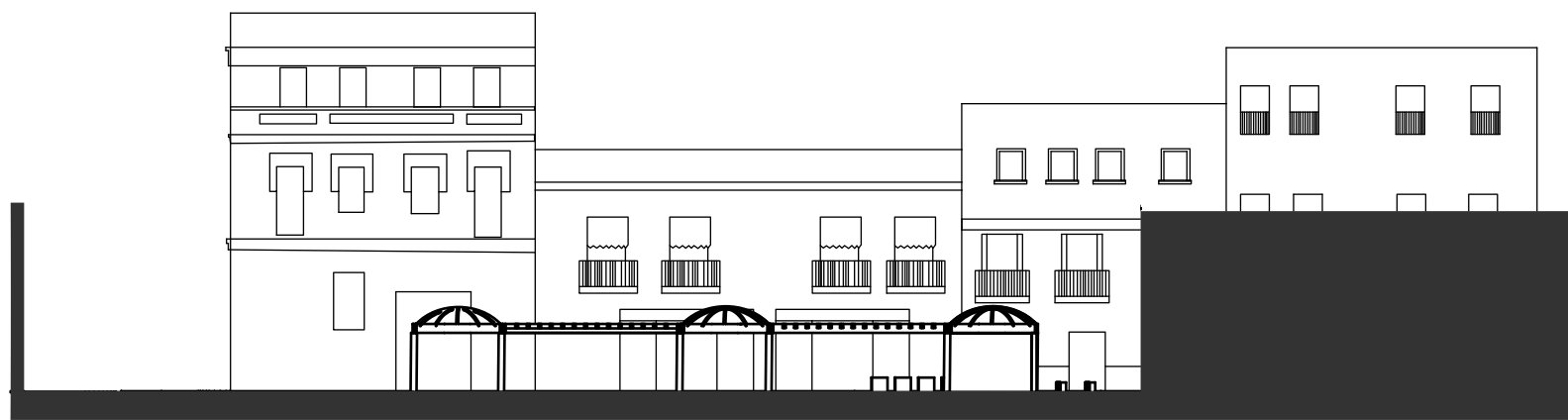




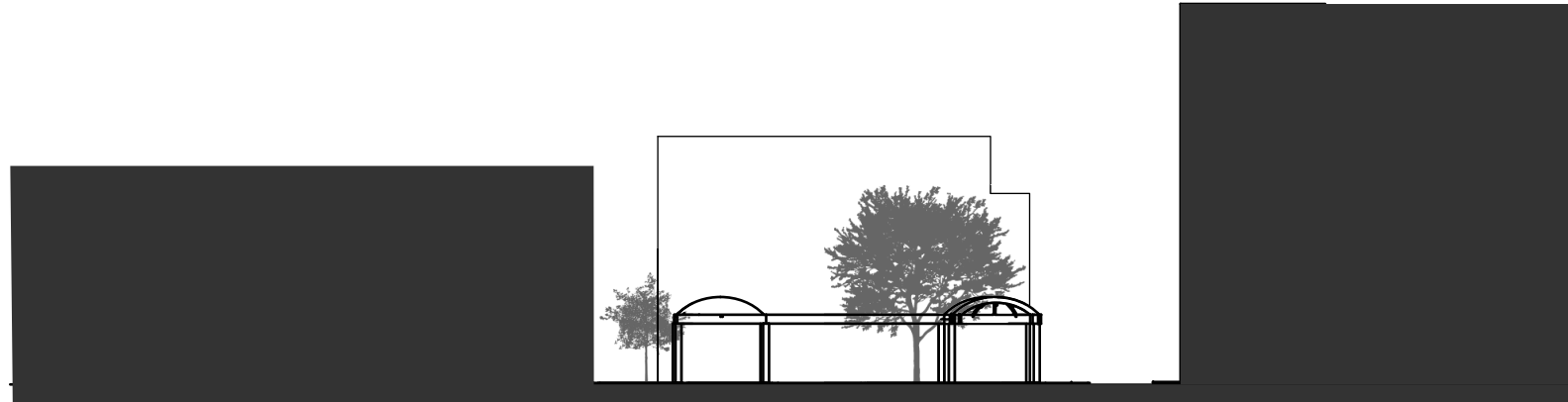
Market Tents



East



West



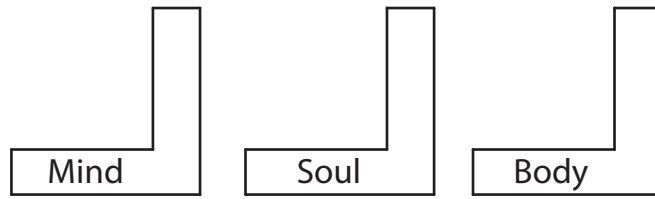
South



North
Scale 1/32"=1'

Retreat: Revelstoke, B.C. Canada

Mind
Body
Soul



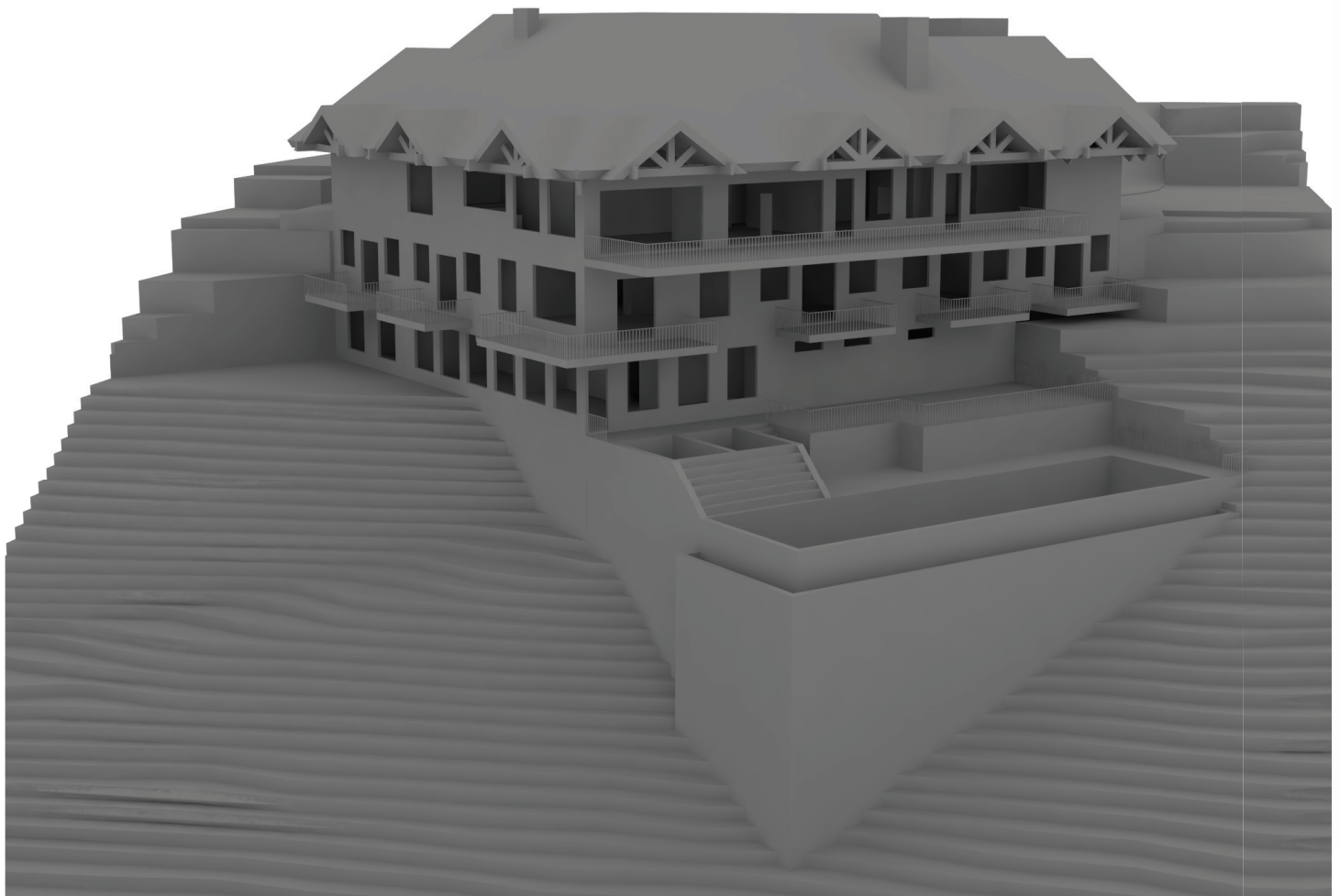
Concept Diagrams

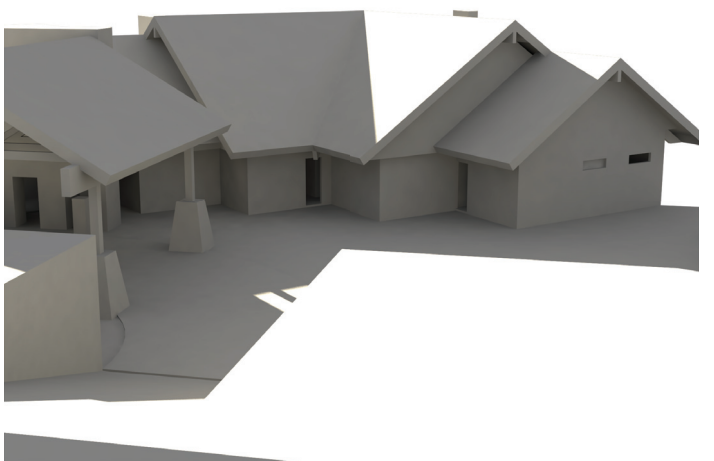
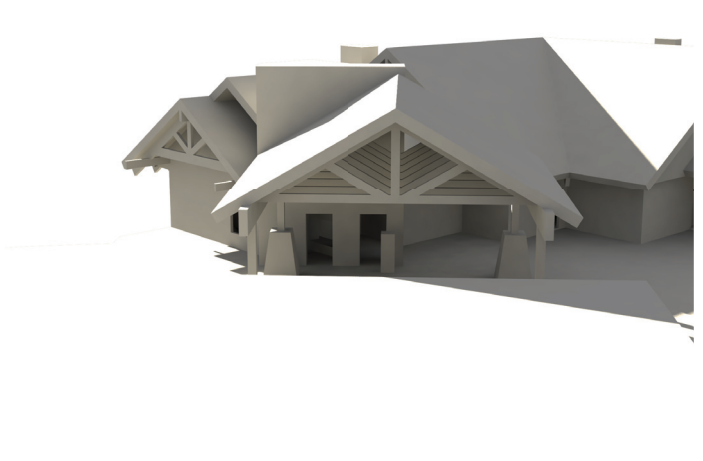
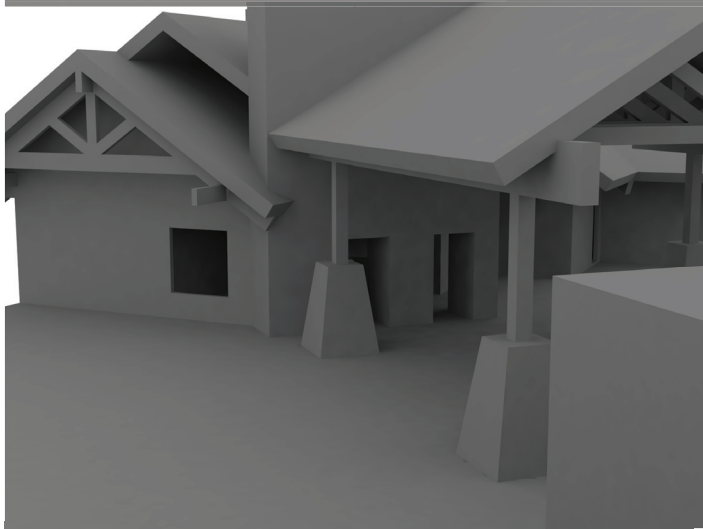
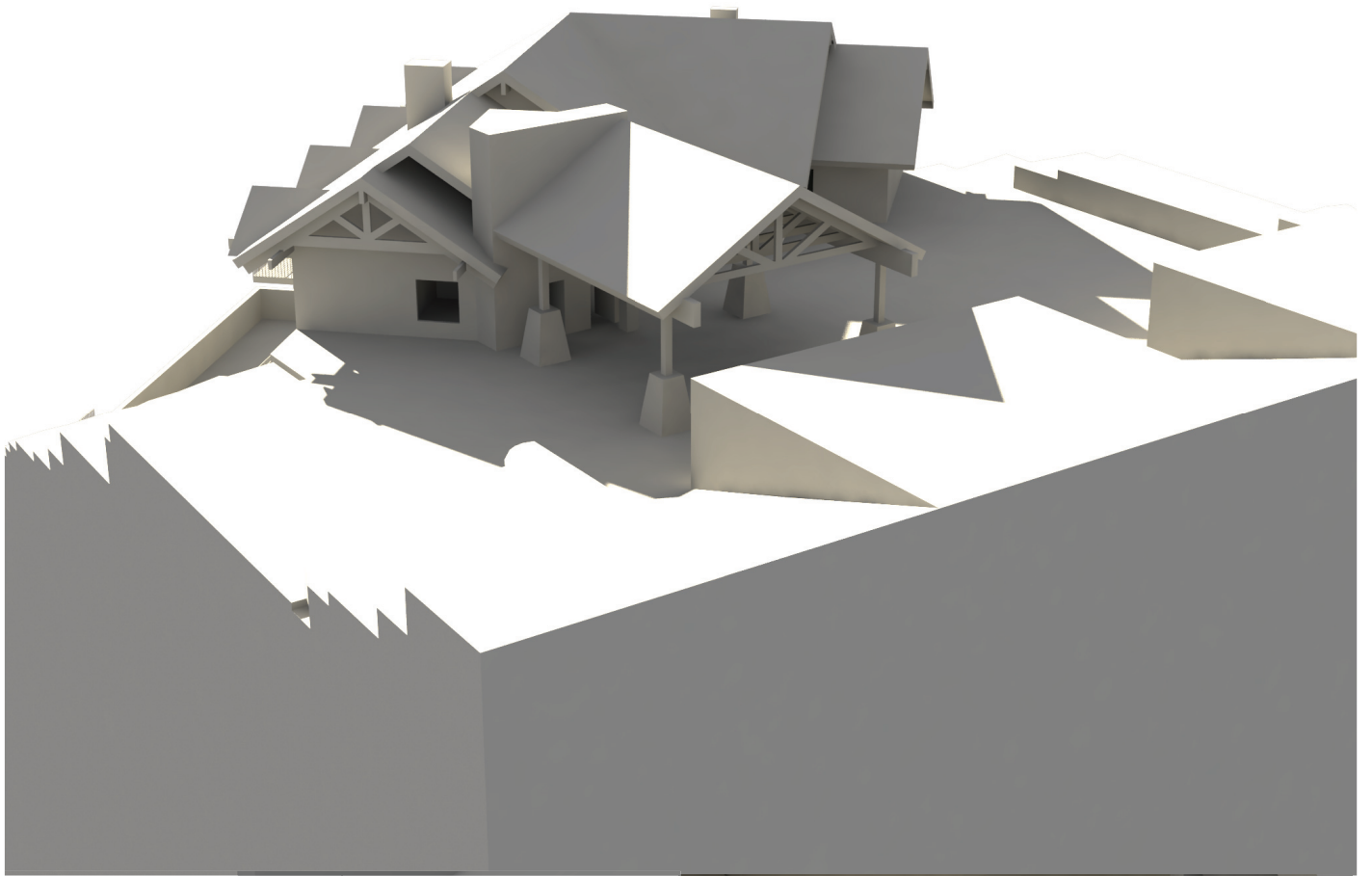
Studio 4: Retreat, Revelstoke, B.C., Canada[Designed in Rhino]

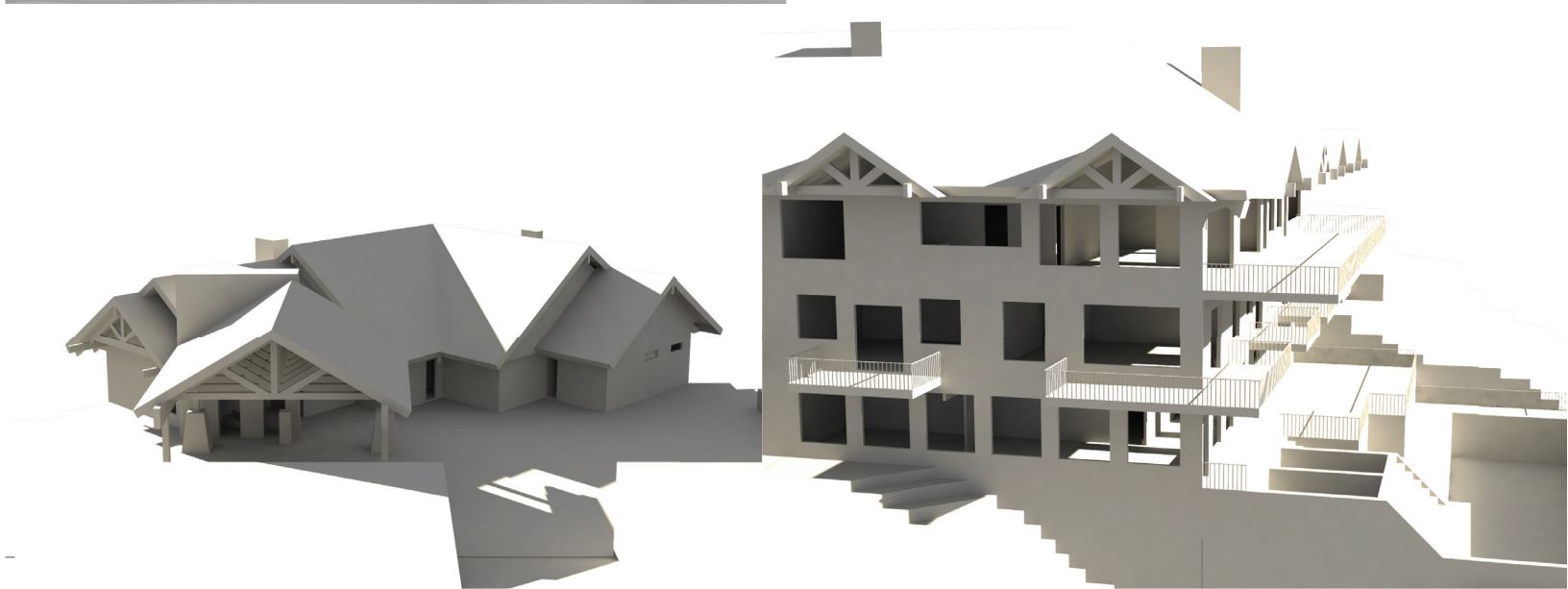
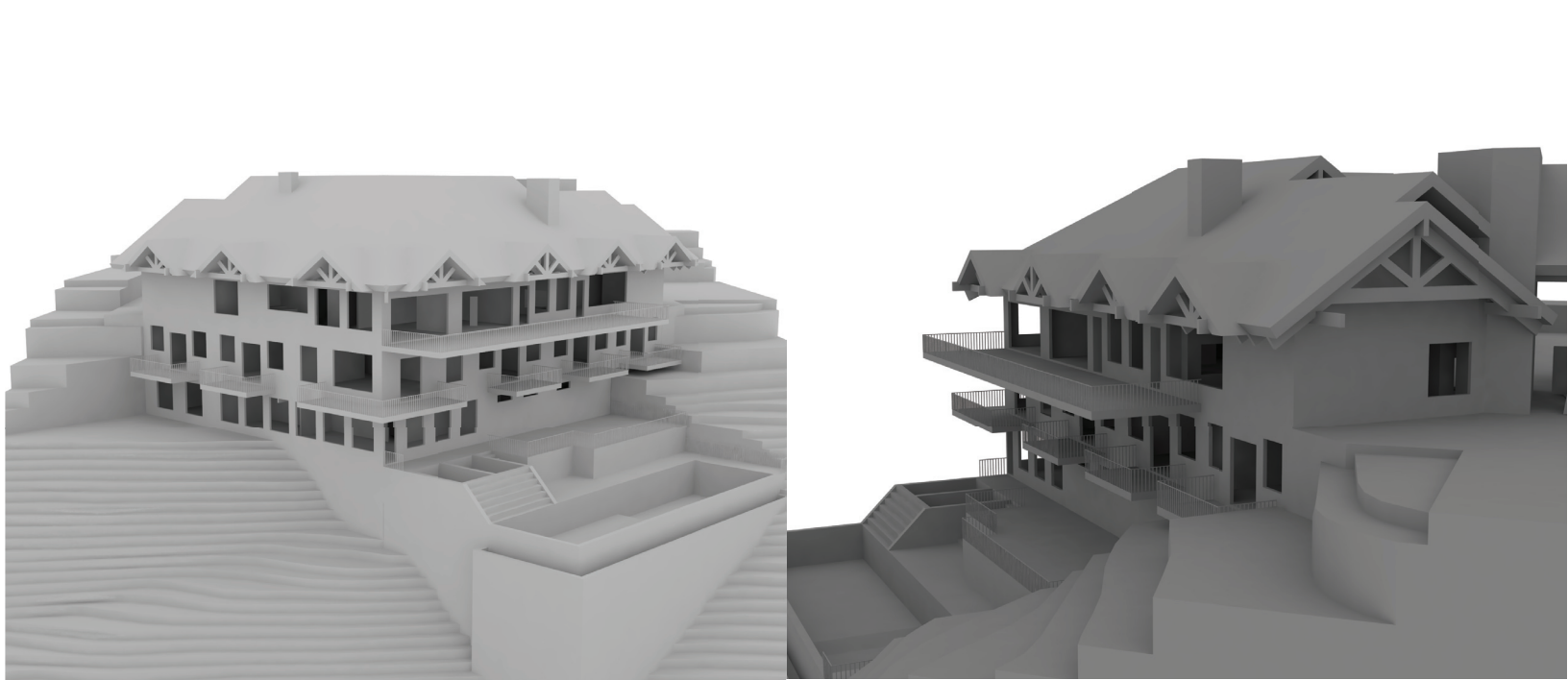
The project was to design a retreat up in the mountains by Revelstoke, B.C in Canada. The location is next to a large ski resort that is very busy. In the winter there is a lot of snow but it doesn't get super cold so it is a good location to go to and during the summer there is nice weather to do activities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

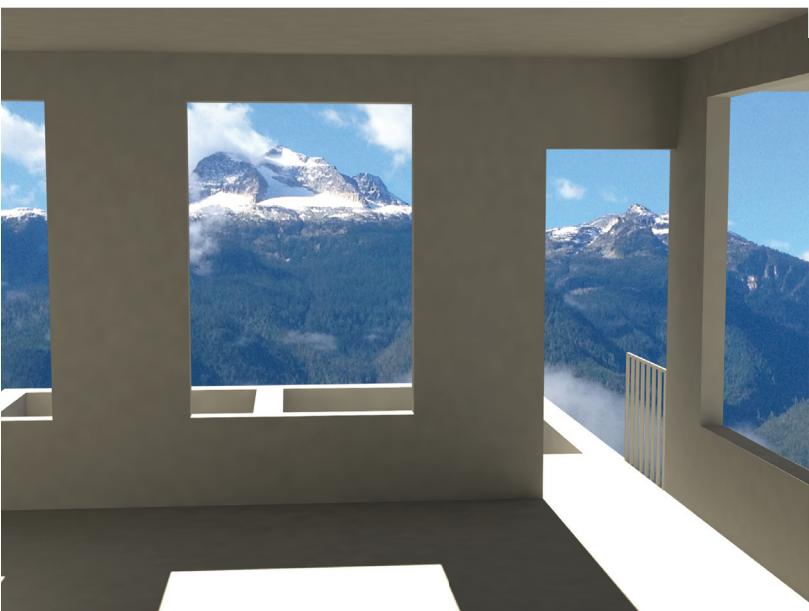
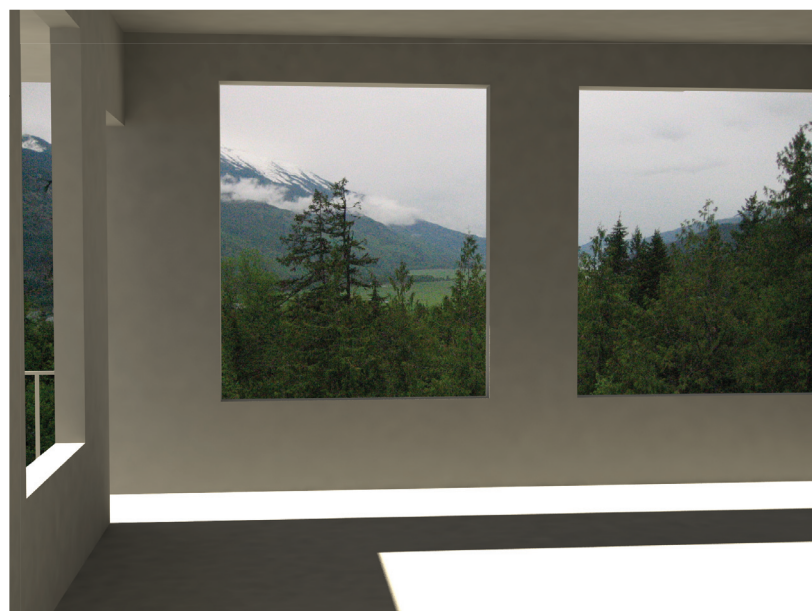
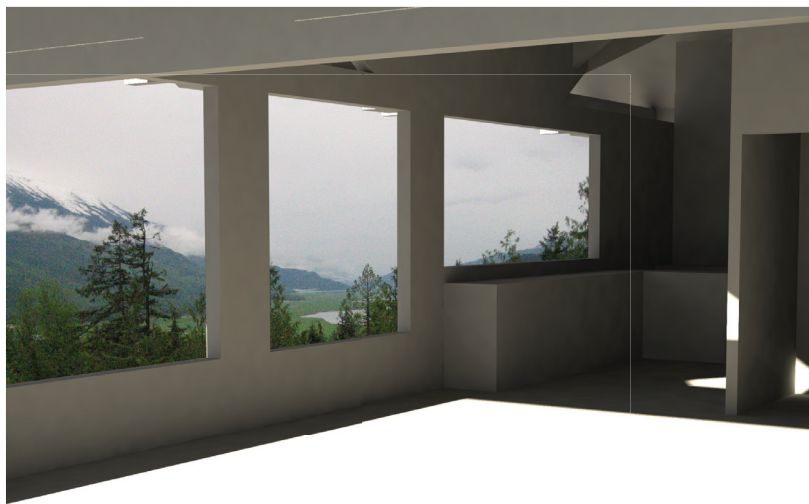
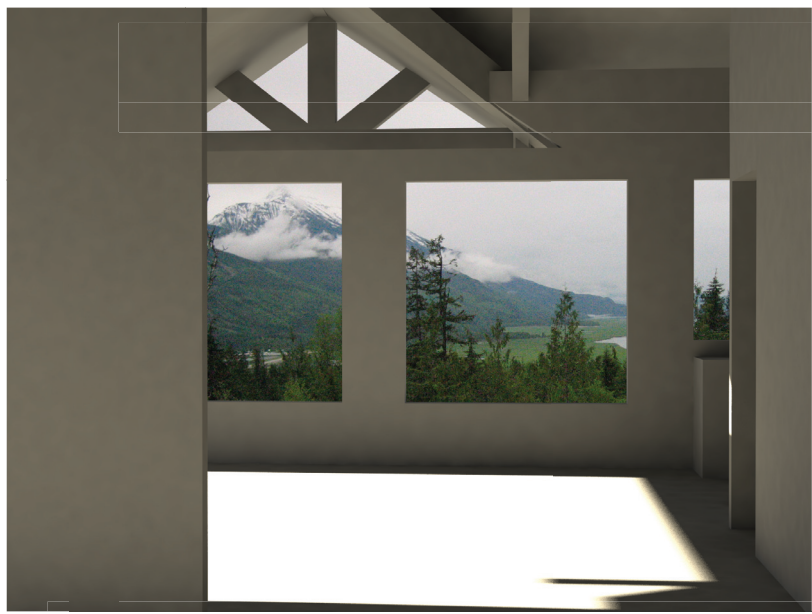
The idea behind this project was to design a retreat that could be a place for people to go and relax at and enjoy the nature around them. The concept is that when a person arrives at the retreat they will feel relaxed and comfortable. This all starts with the fireplace in the entryway. When you enter 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.

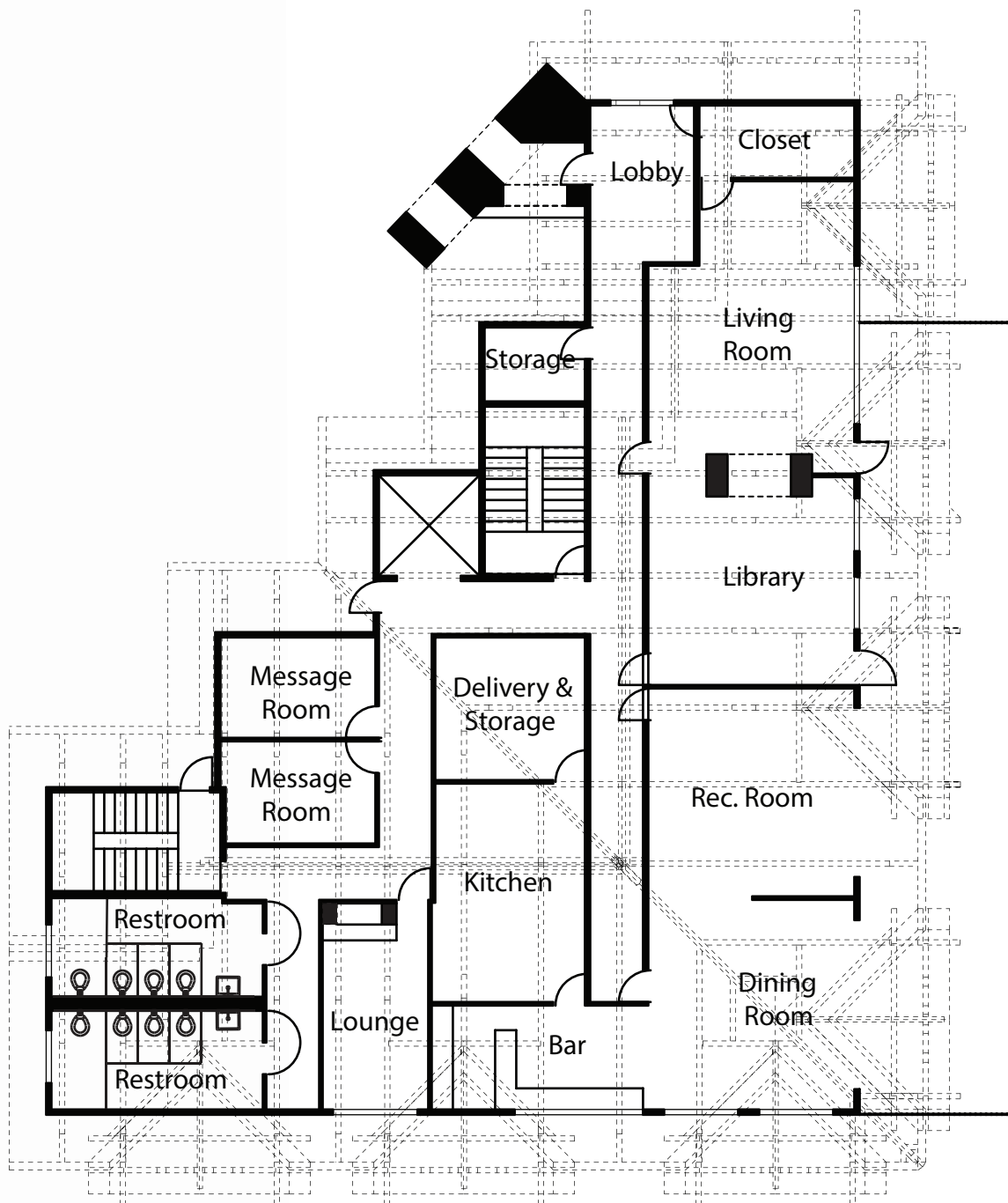
The concept of the building is mind body and soul the idea of the retreat is to rejuvenate all three. The top level is for the soul where you can be with other people to enjoy their company and rejuvenate your soul. The suite level is about rejuvenating your mind it allows you be alone with yourself 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.

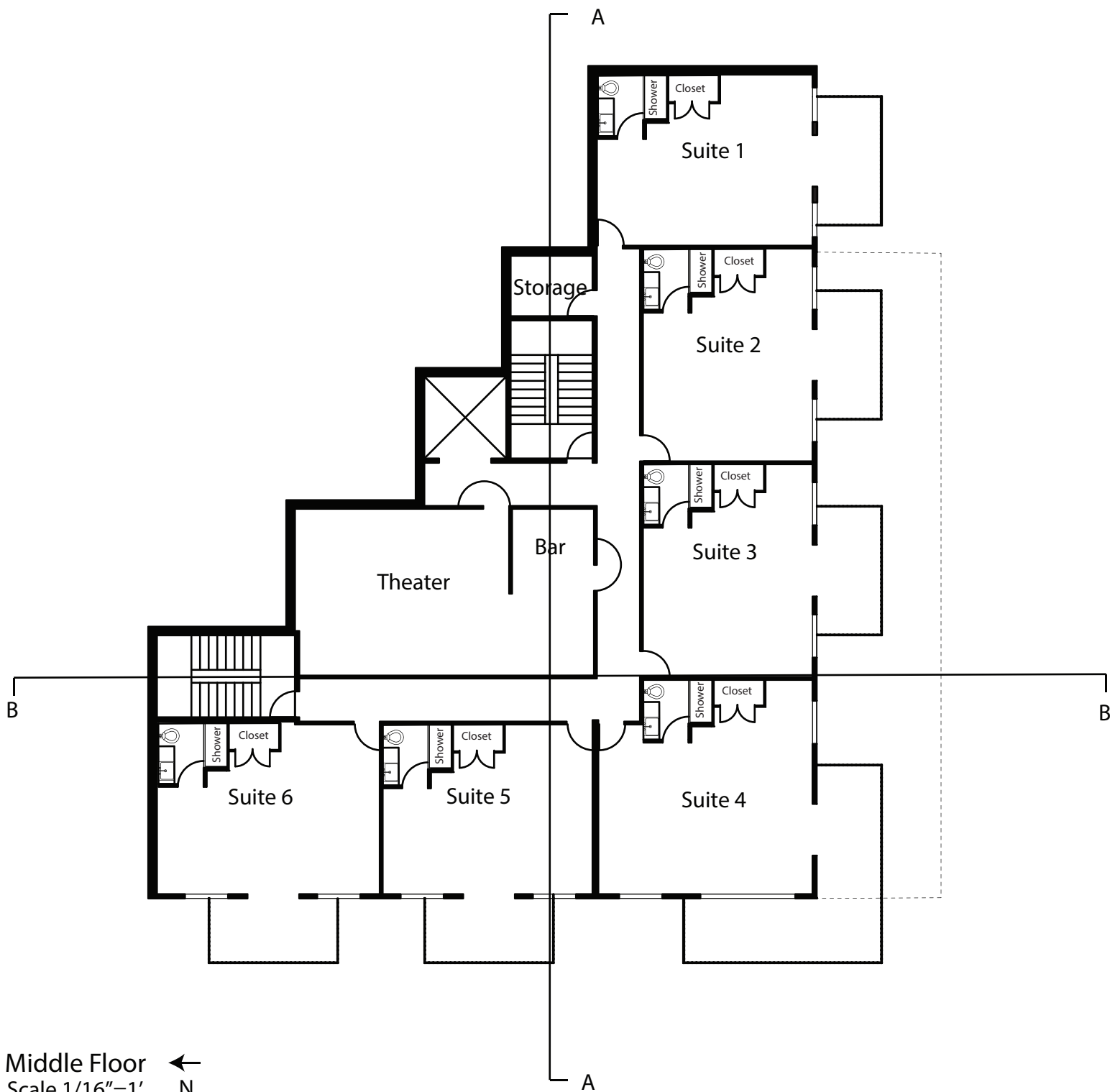


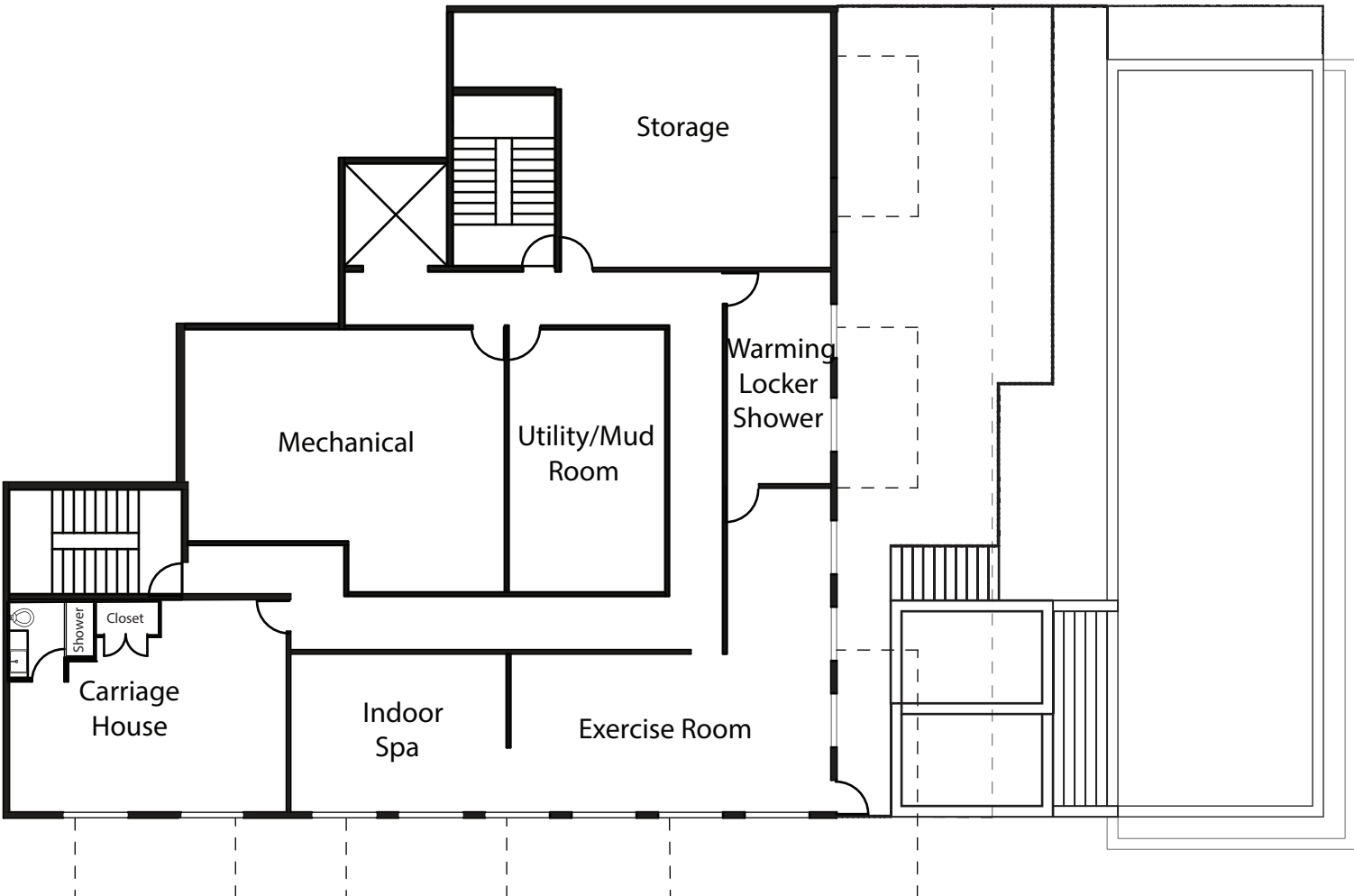




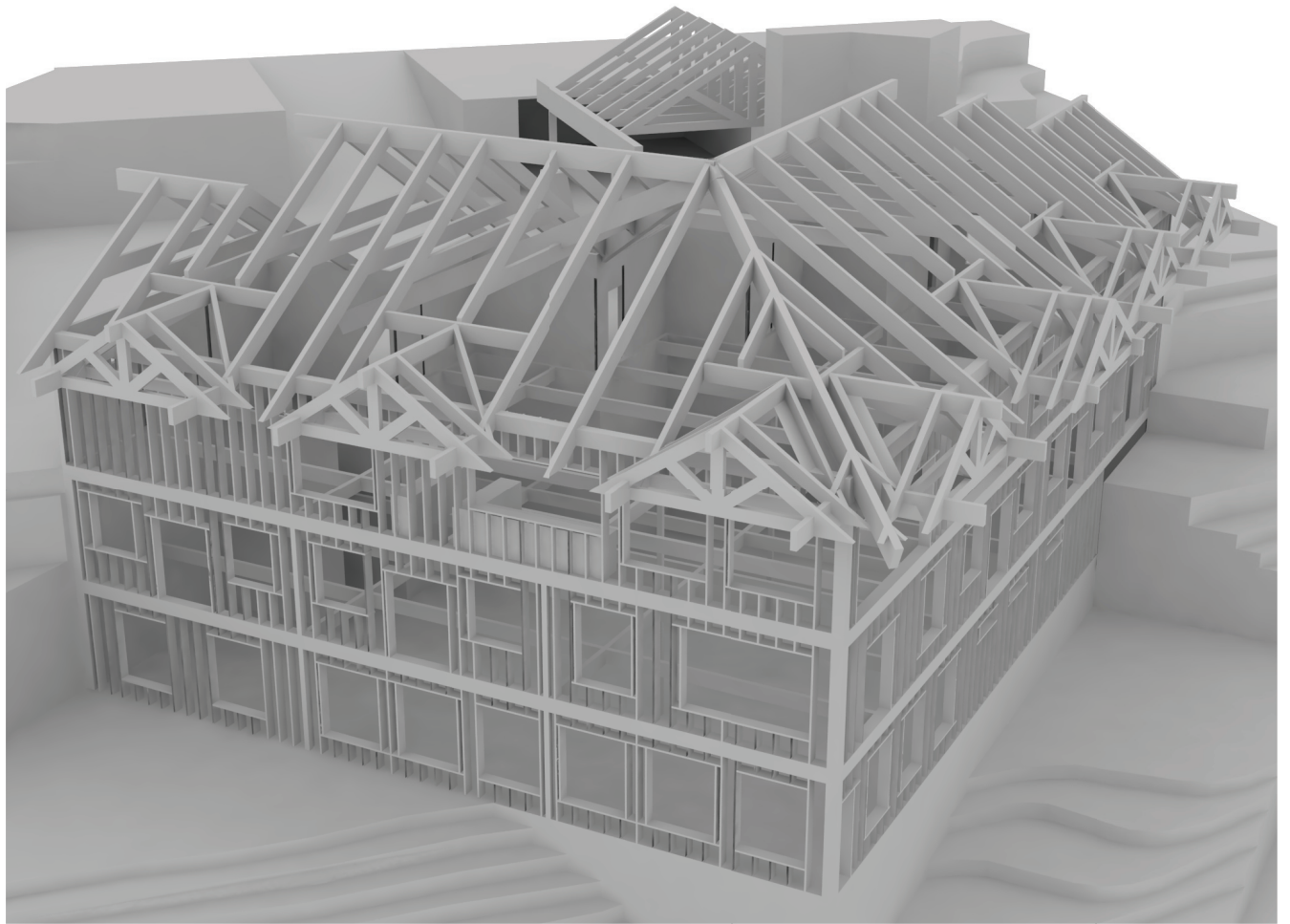




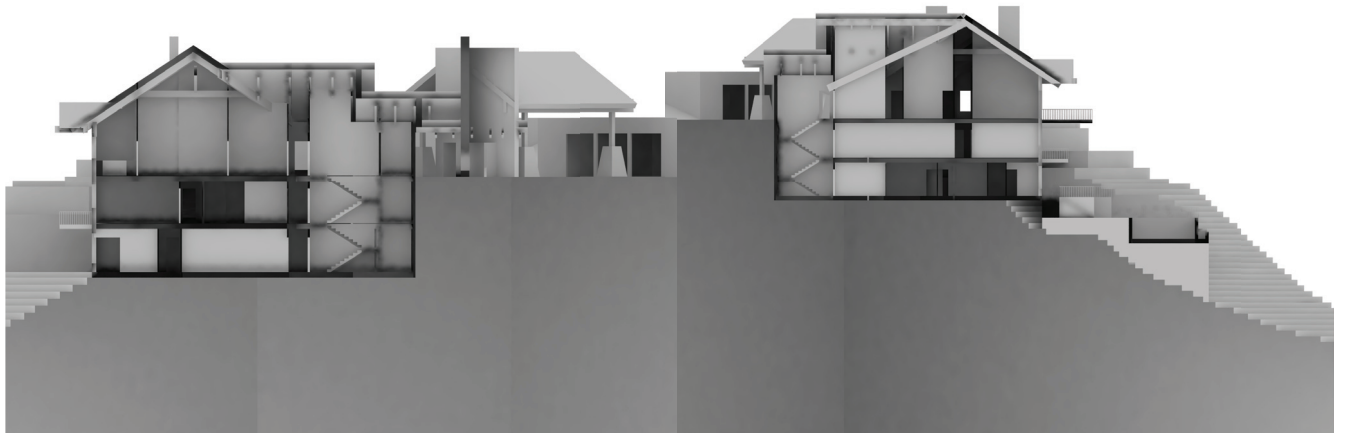




Bottom Floor ←
Scale 1/16"=1' N

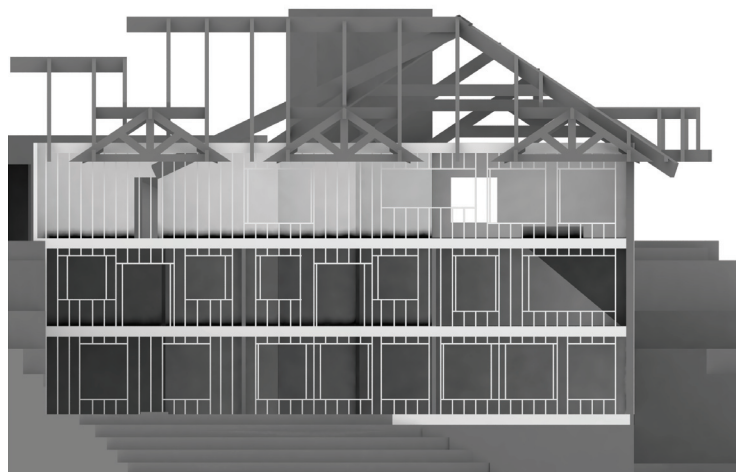


Structural Axonometric

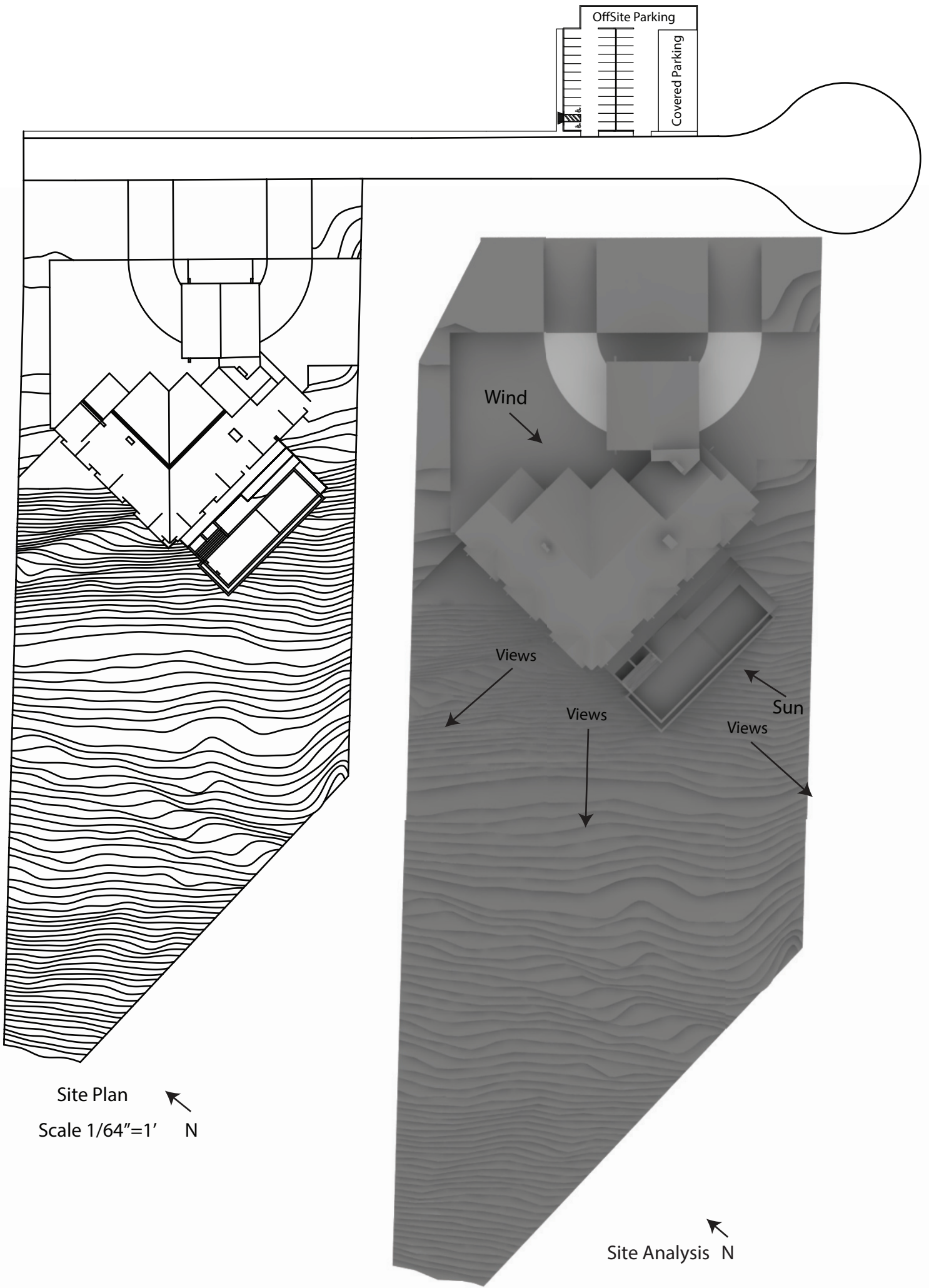


Section AA

Section BB



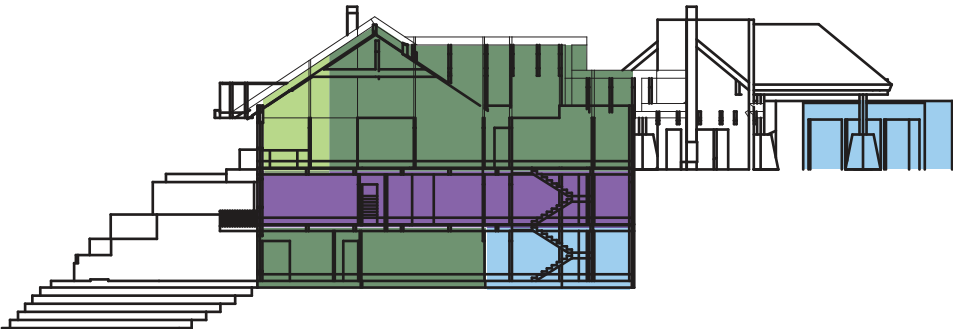
Structural View



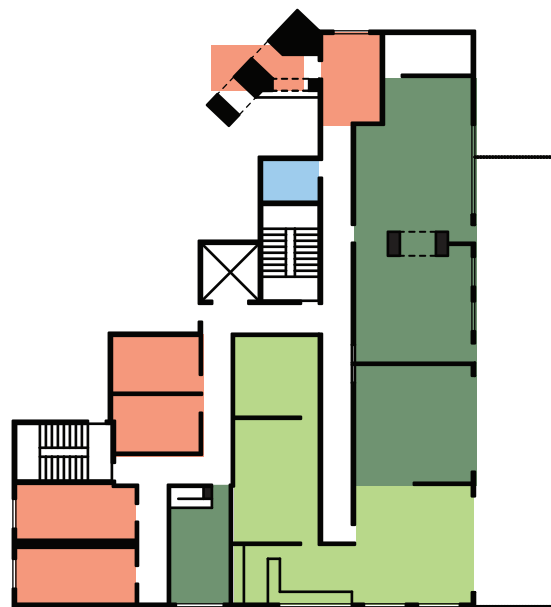
Site Plan
Scale 1/64"=1' N

Site Analysis N

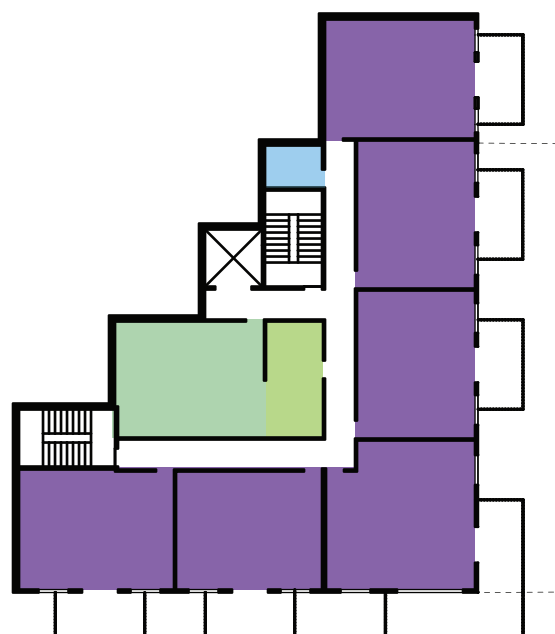
Top Floor	Area	Occupancy Load	Occupancy Type		
				Assembly Group 1	
Lobby	150 sf	3		Assembly Group 2	
Coats	105 sf	2		Assembly Group 3	
Restroom	400 sf	?		Business	
Massage Room 1	150 sf	3		Residential Group 1	
				Residential Group 2	
Massage Room 2	150 sf	3		Storage Group 2	
				Utility	
Community 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
			Pool Deck	475 sf	31
Dining Room	400 sf	30	Hot Pool	150 sf	10
Bar	200 sf	15	Cold Pool	150 sf	10
Kitchen	315 sf	3	Main Pool	1,400 sf	93
Middle Floor	Area		Top Floor Deck	1,079 sf	71
Suite 1	500 sf	2			
Suite 2	500 sf	2	Suite 1 Deck	120 sf	8
Suite 3	500 sf	2	Suite 2 Deck	120 sf	8
Suite 4	600 sf	3	Suite 3 Deck	120 sf	8
Suite 5	500 sf	2	Suite 4 Deck	304 sf	20
Suite 6	500 sf	2	Suite 5 Deck	120 sf	8
Theater	500 sf	# of Seats (20)	Suite 6 Deck	120 sf	8
Bar	100 sf	7	Outdoor Total Area	4,356 sf	352
Storage	100 sf	.3			
Bottom Floor	Area		Occupancy Loads		
Warming Locker Room	200 sf	4			
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			



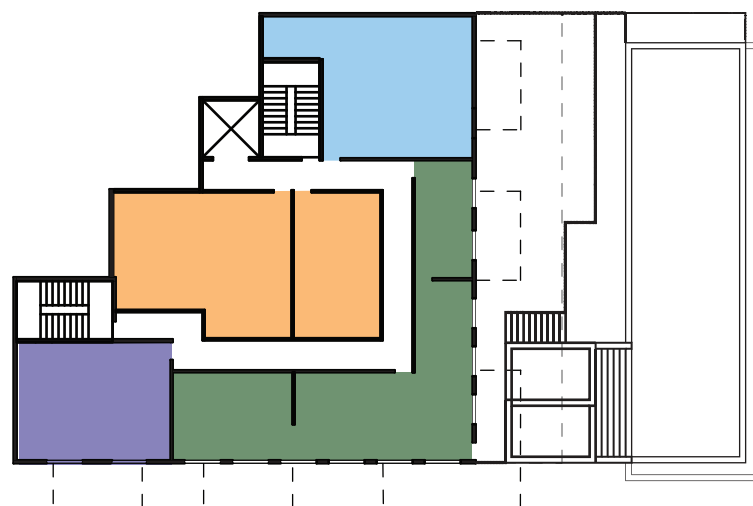
Public	Private	Social	Intimate	
				Entry Reception
				Coats
				Restrooms
				Community Living Area
				Off./Study/Library/Conf.
				Community Rec. Room
				Community Dining
				Bar Area/Wine Cellar
				Kitchen
				Delivery & Storage
				Theater
				Suite One
				Suite Two
				Suite Three
				Suite 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



Top Floor



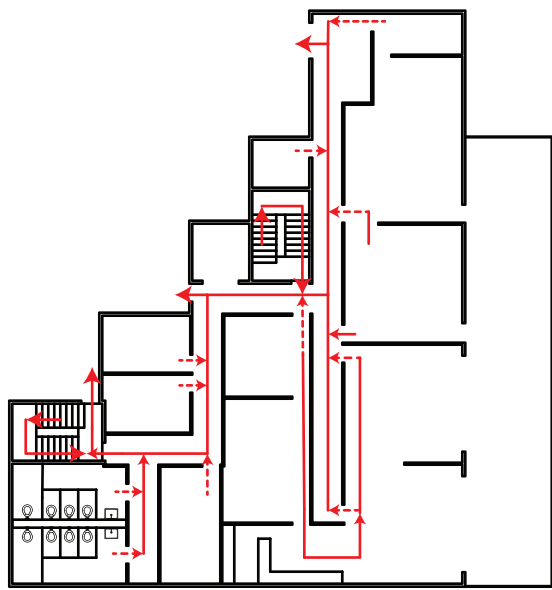
Middle Floor



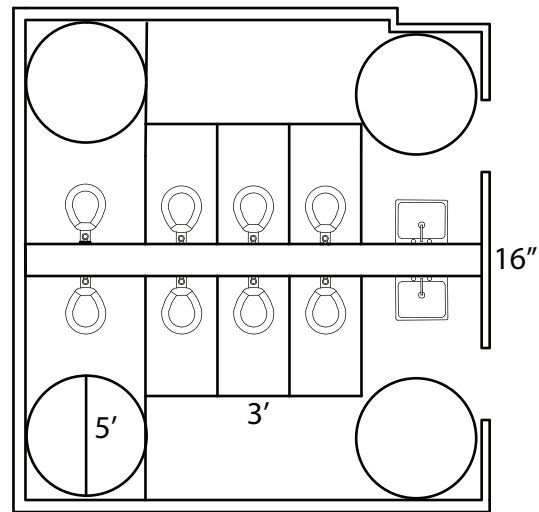
Bottom Floor

Scale 1/32"=1'

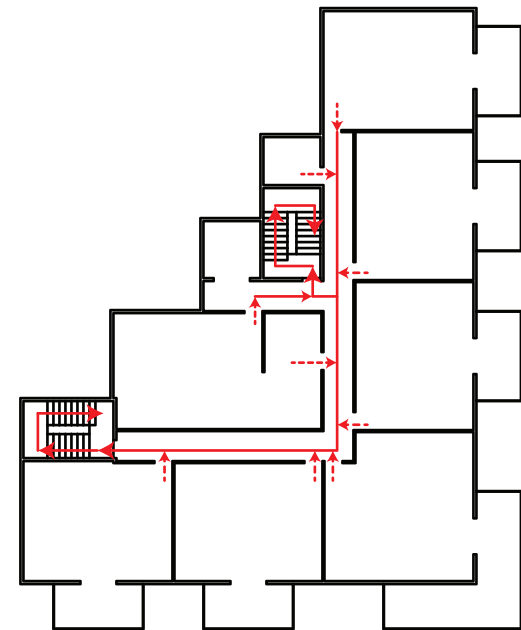




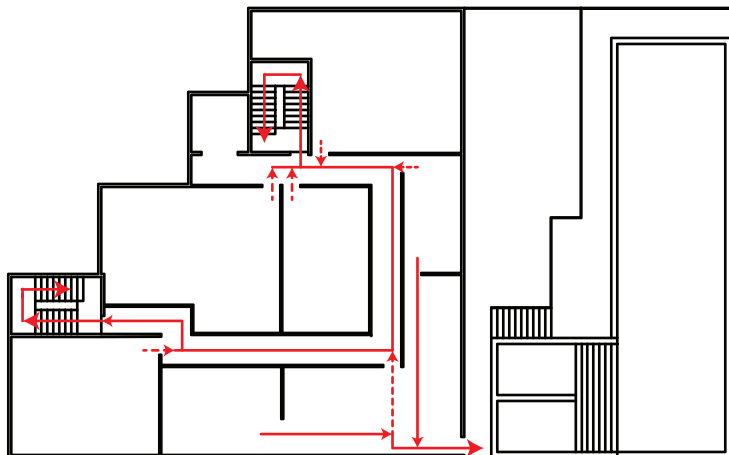
Main Level



Bathroom Detail Scale 1/8"=1'



Middle Level



Bottom Level

Assembly max travel distance unsprinklered 200'
 Assembly max travel distance sprinklered 250'
 Assembly open air seating with combustible construction 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 Fountain 1 per 1000 occupants

Business:

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 Fountain: 1 per 1000 occupants

Residential R-1:

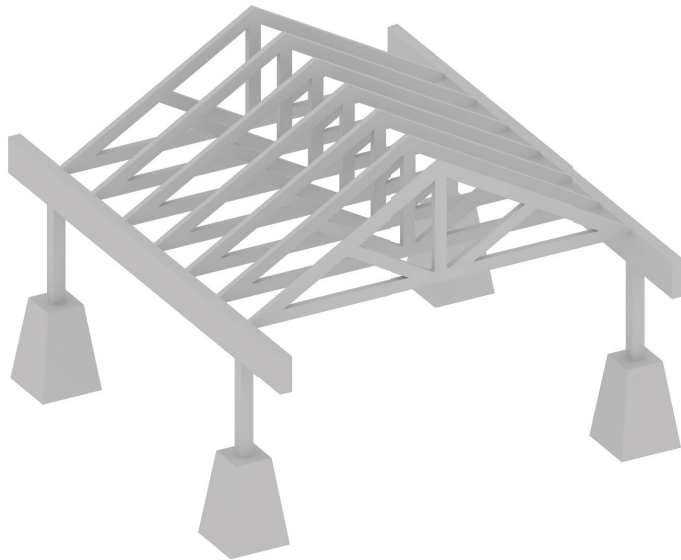
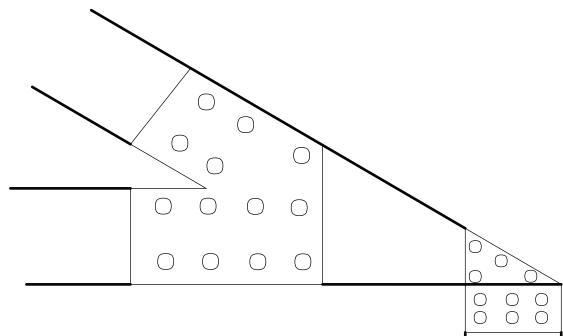
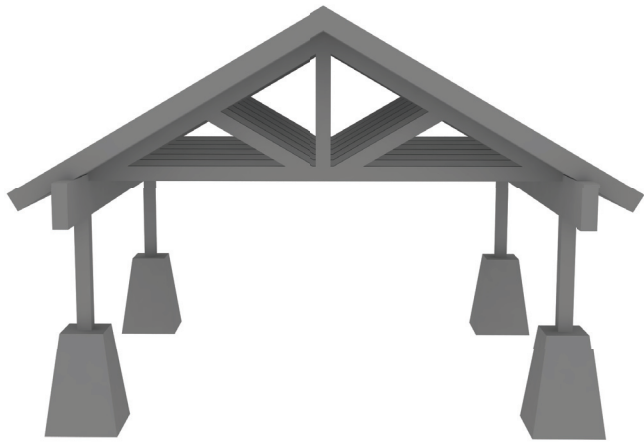
Water closet: 1 per sleeping unit

Lavatories: 1 per sleeping unit

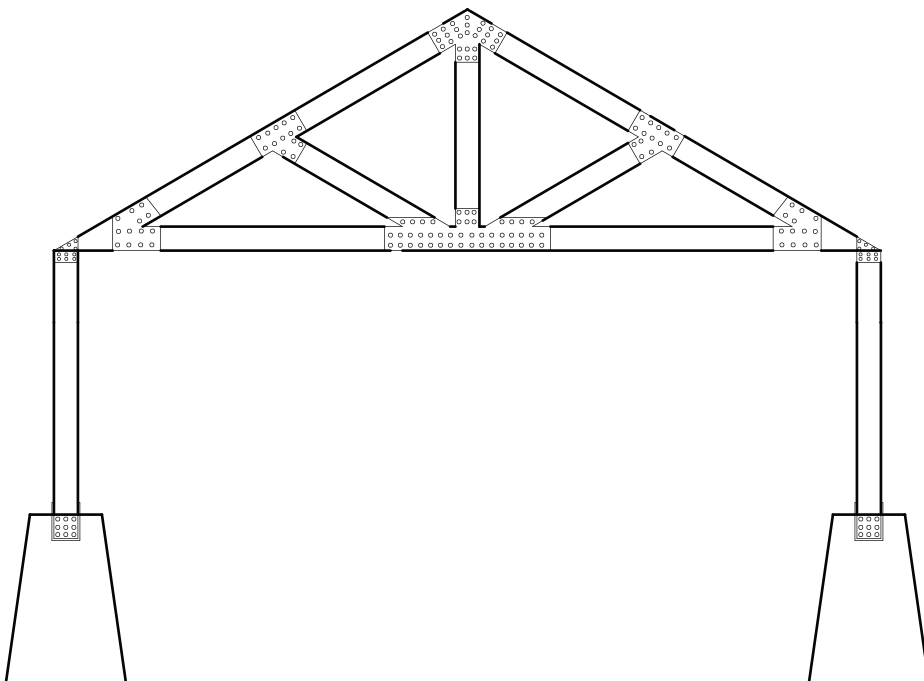
No water fountain

Egress Routes Scale 1/32"=1'

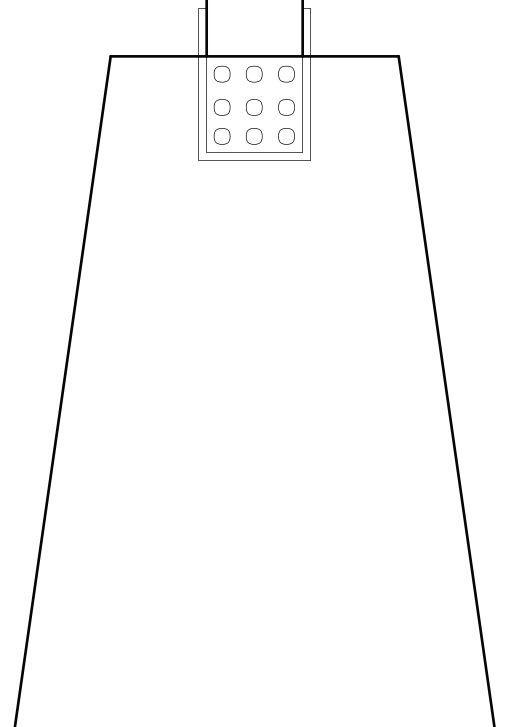




Structural Axonometric



Scale 1/8" = 1'

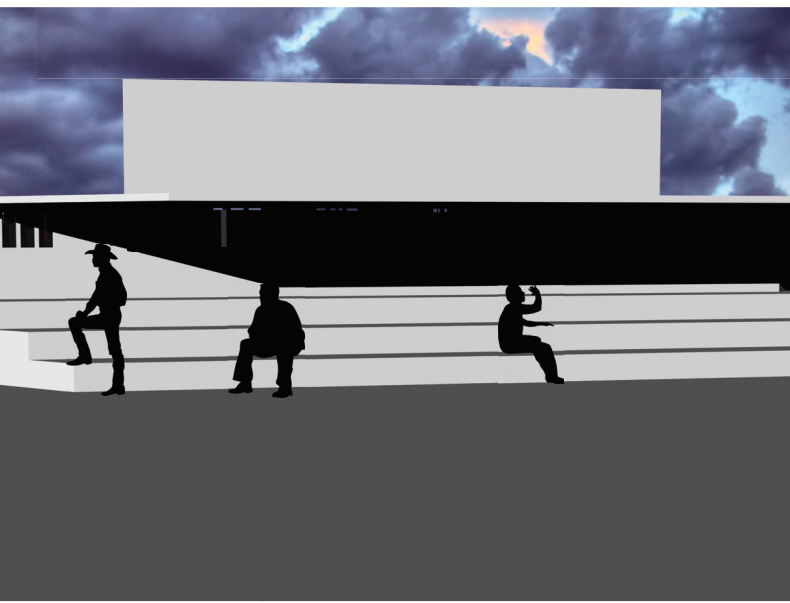
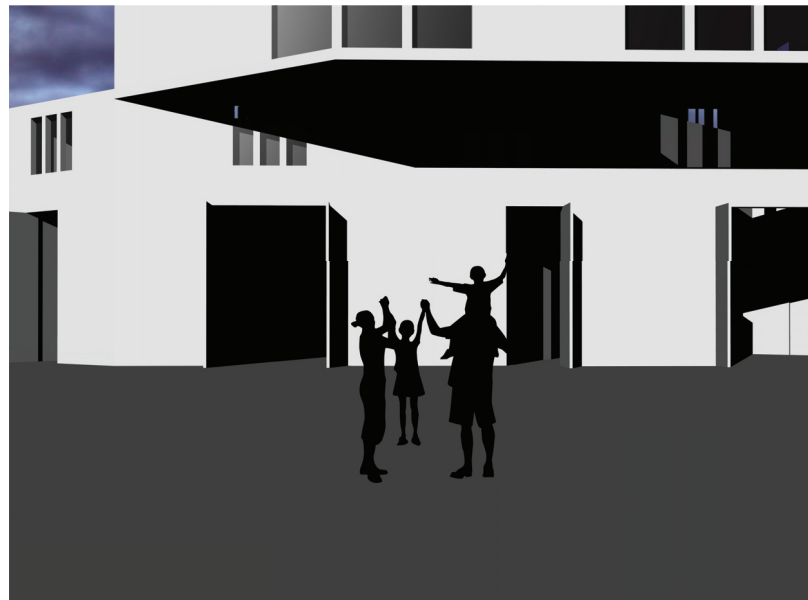
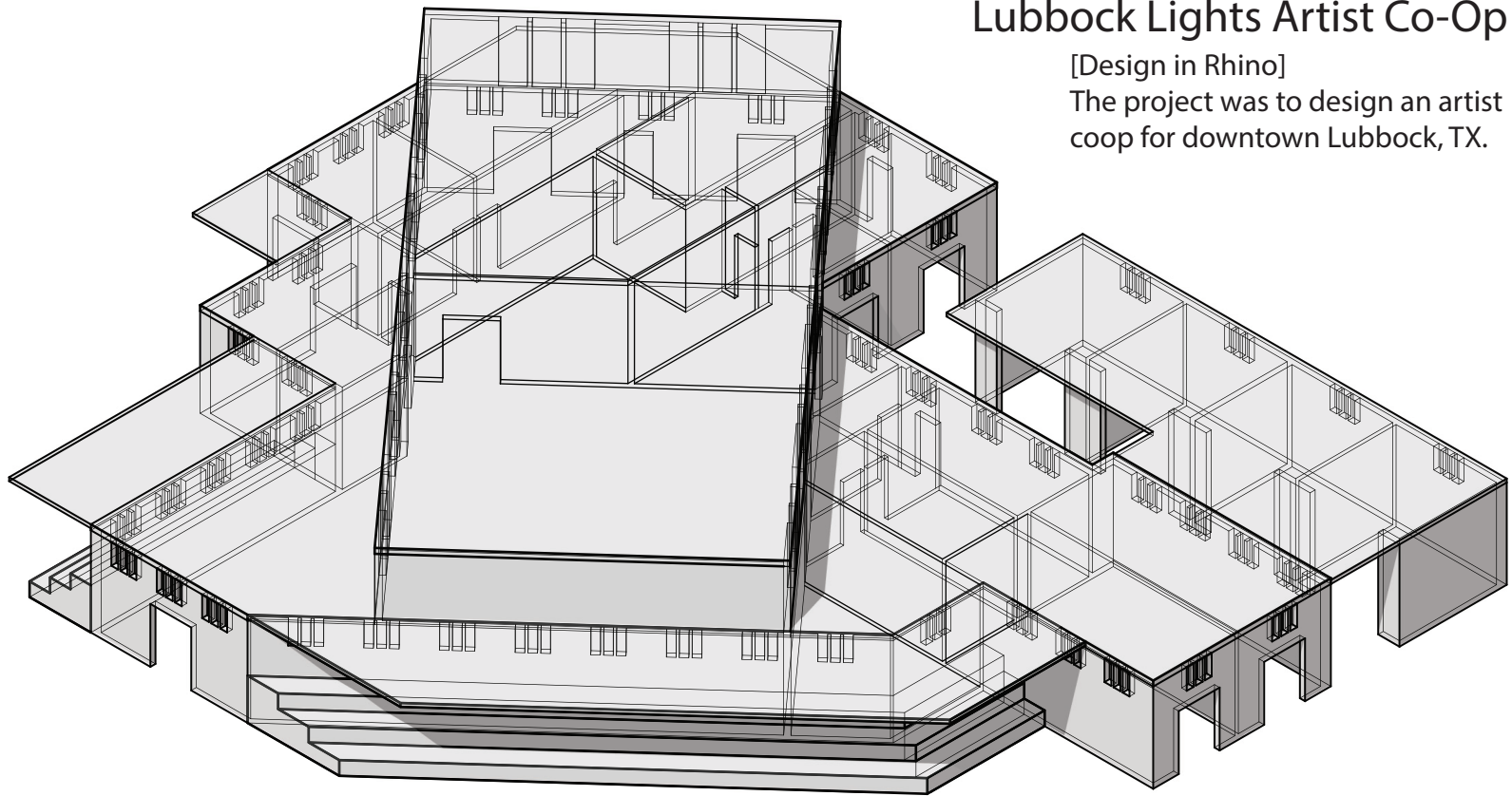


Scale 1/2" = 1'

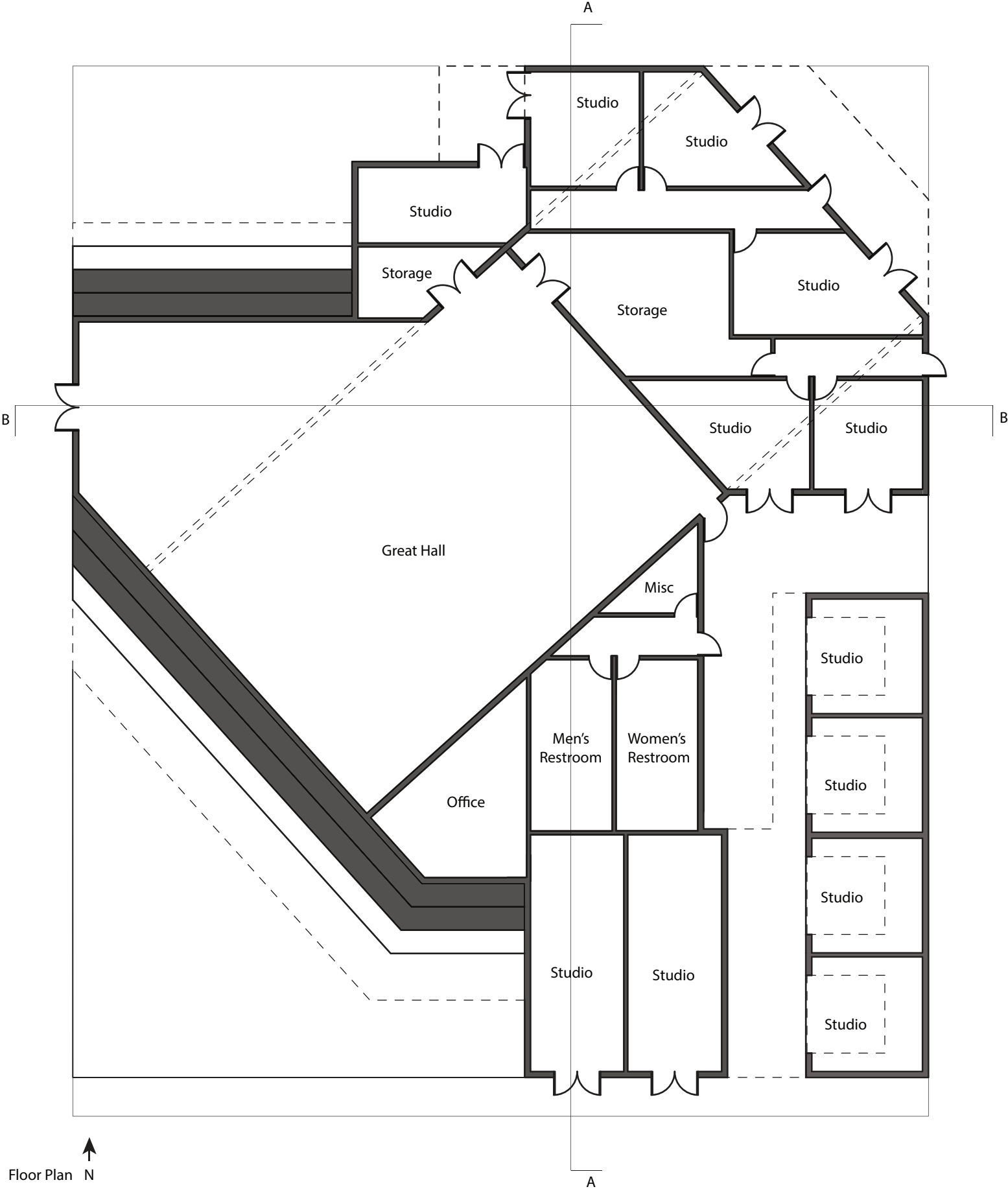
Lubbock Lights Artist Co-Op

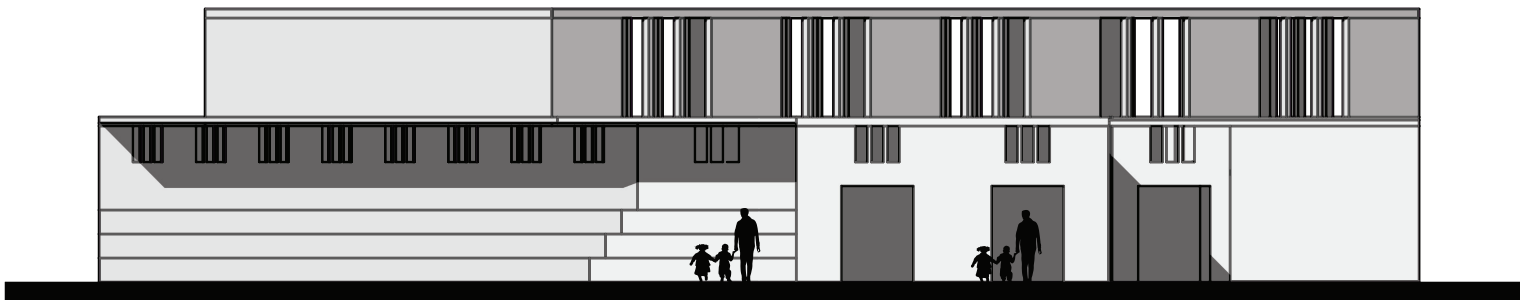
[Design in Rhino]

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

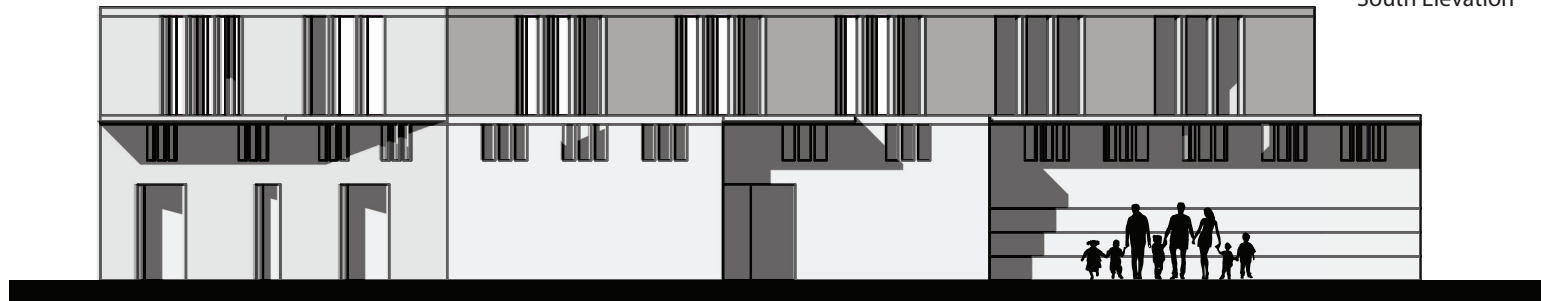


Lubbock Lights Artist Co-Op

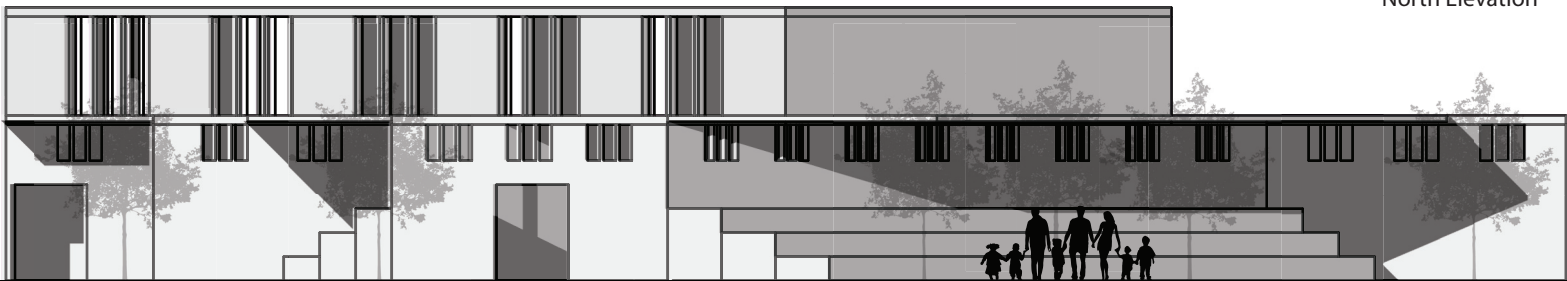




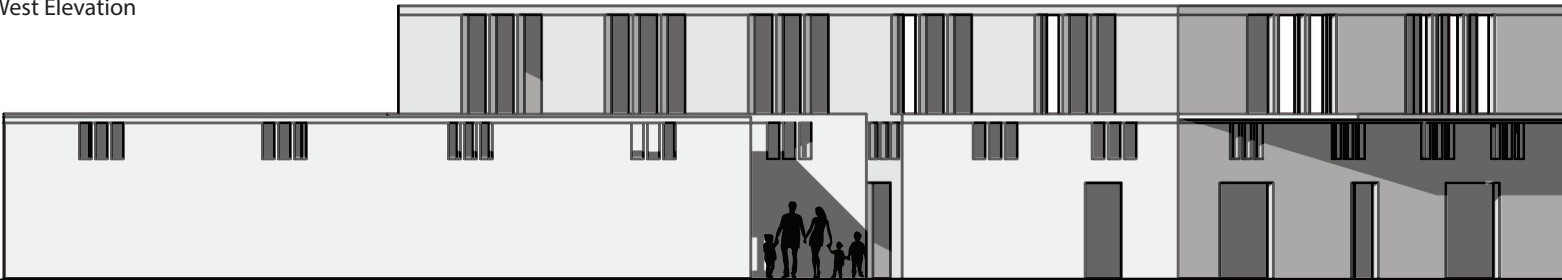
South Elevation



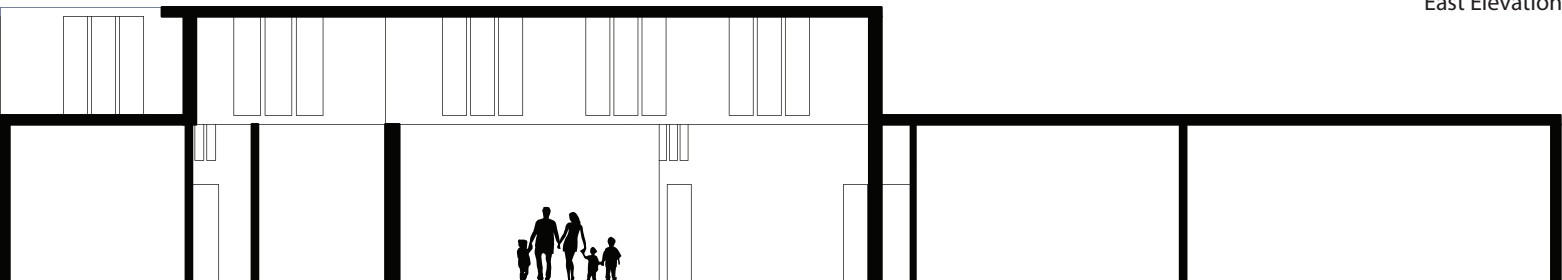
North Elevation



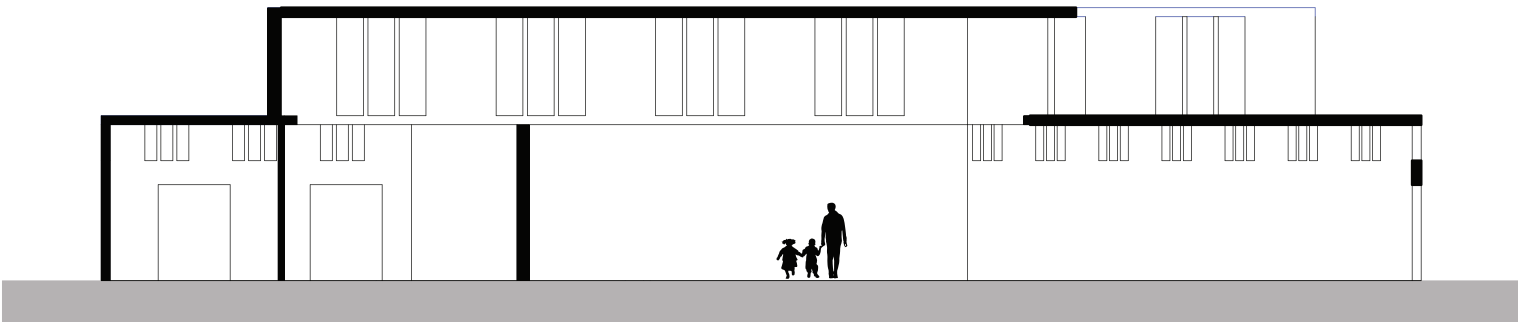
West Elevation



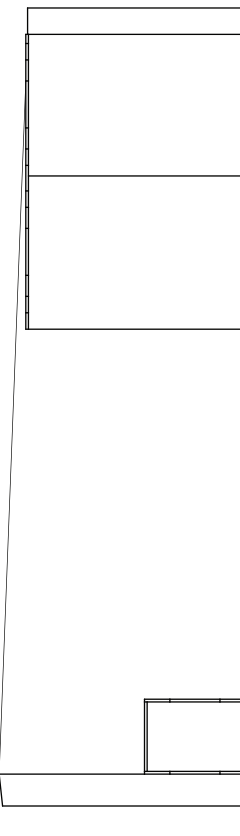
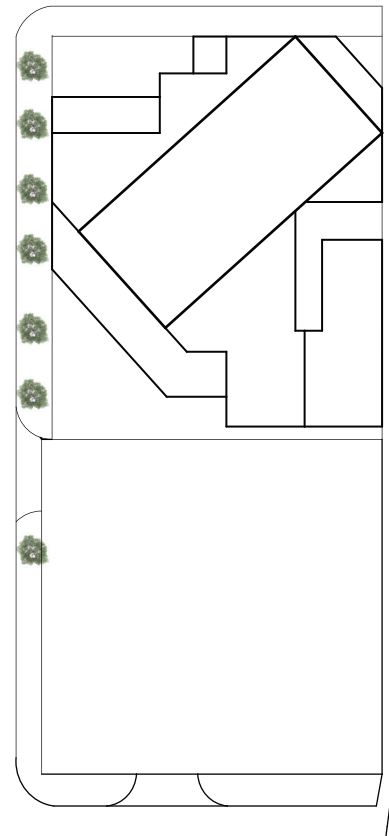
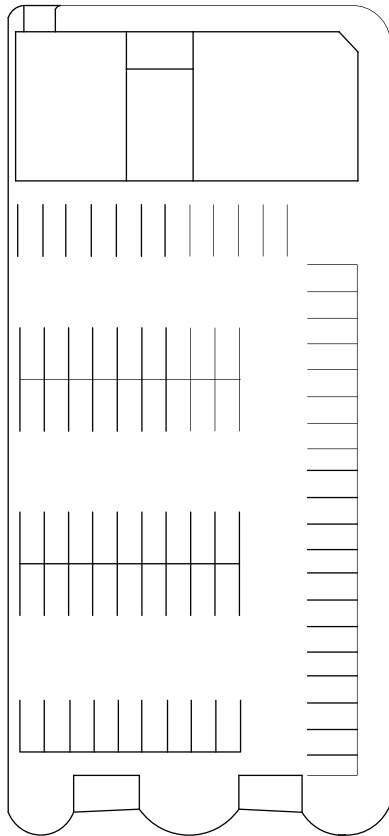
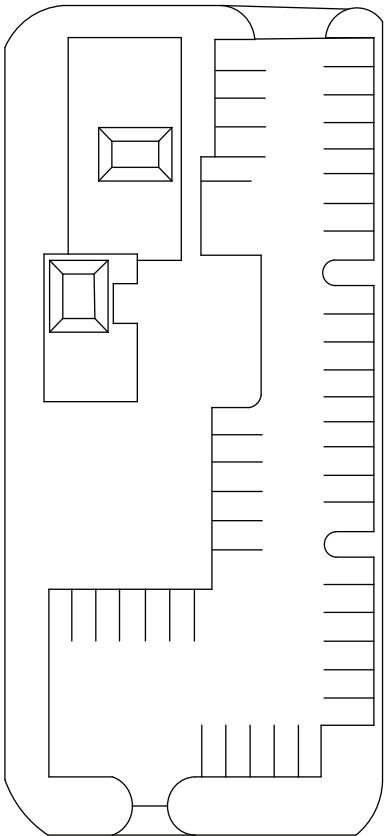
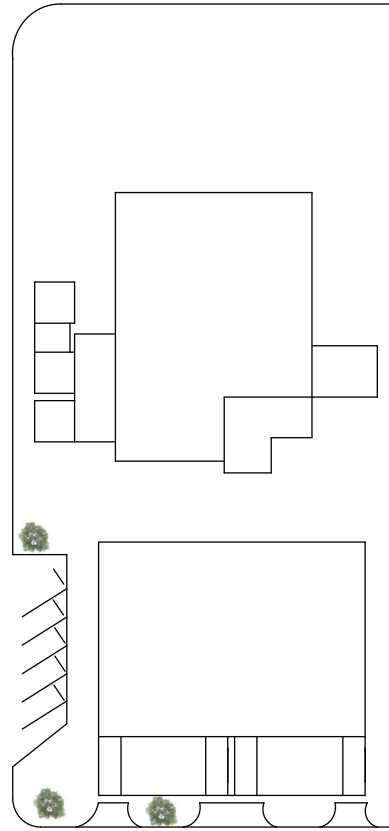
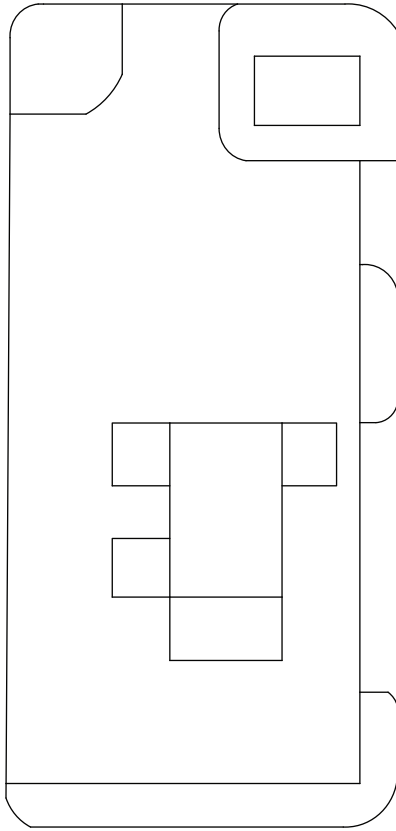
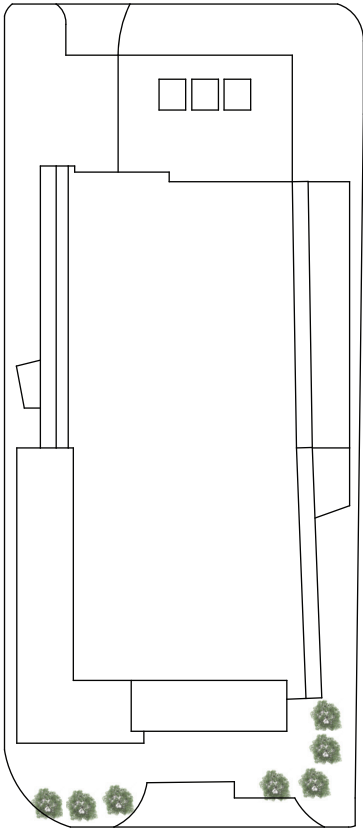
East Elevation



Section AA



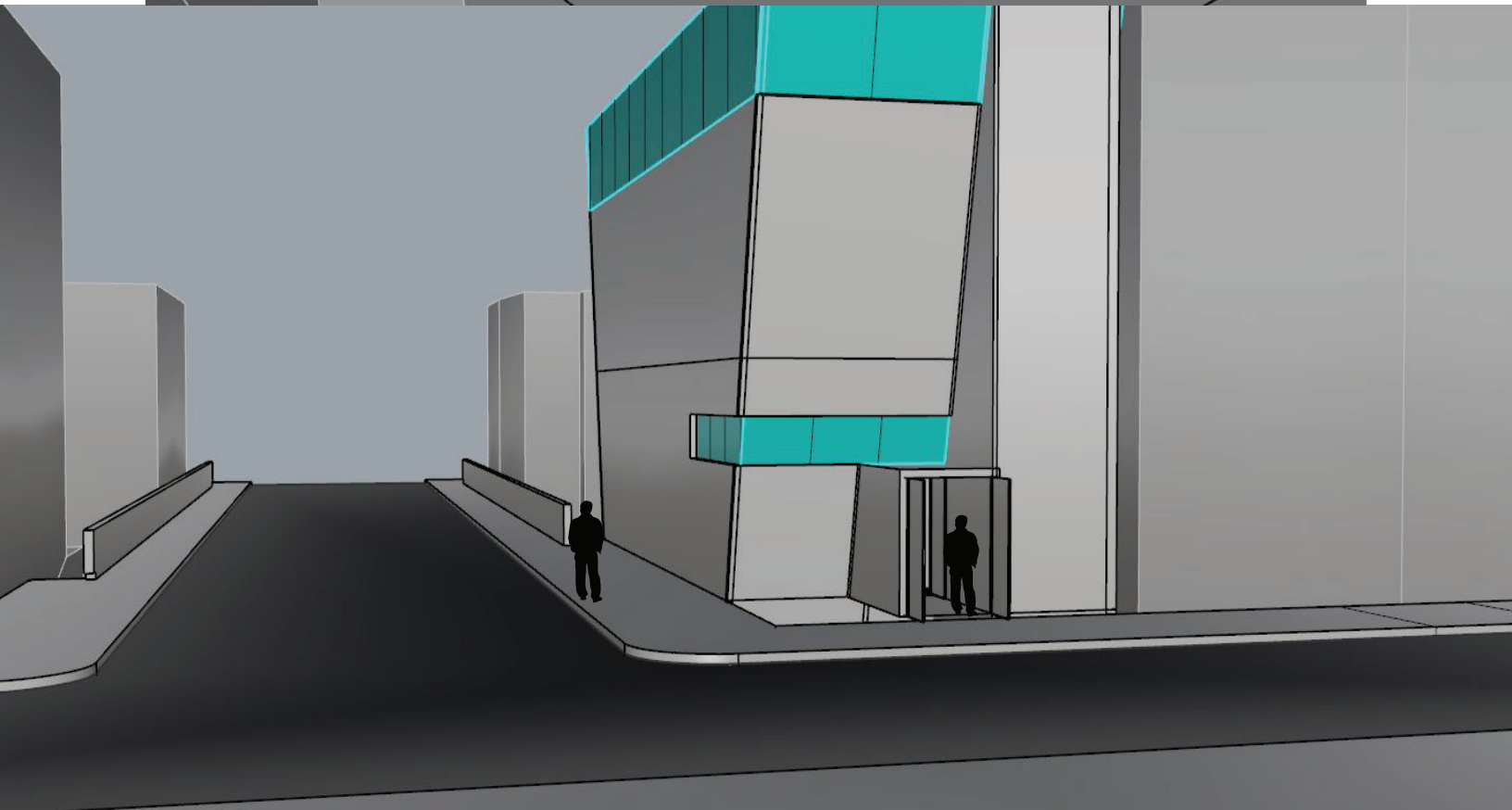
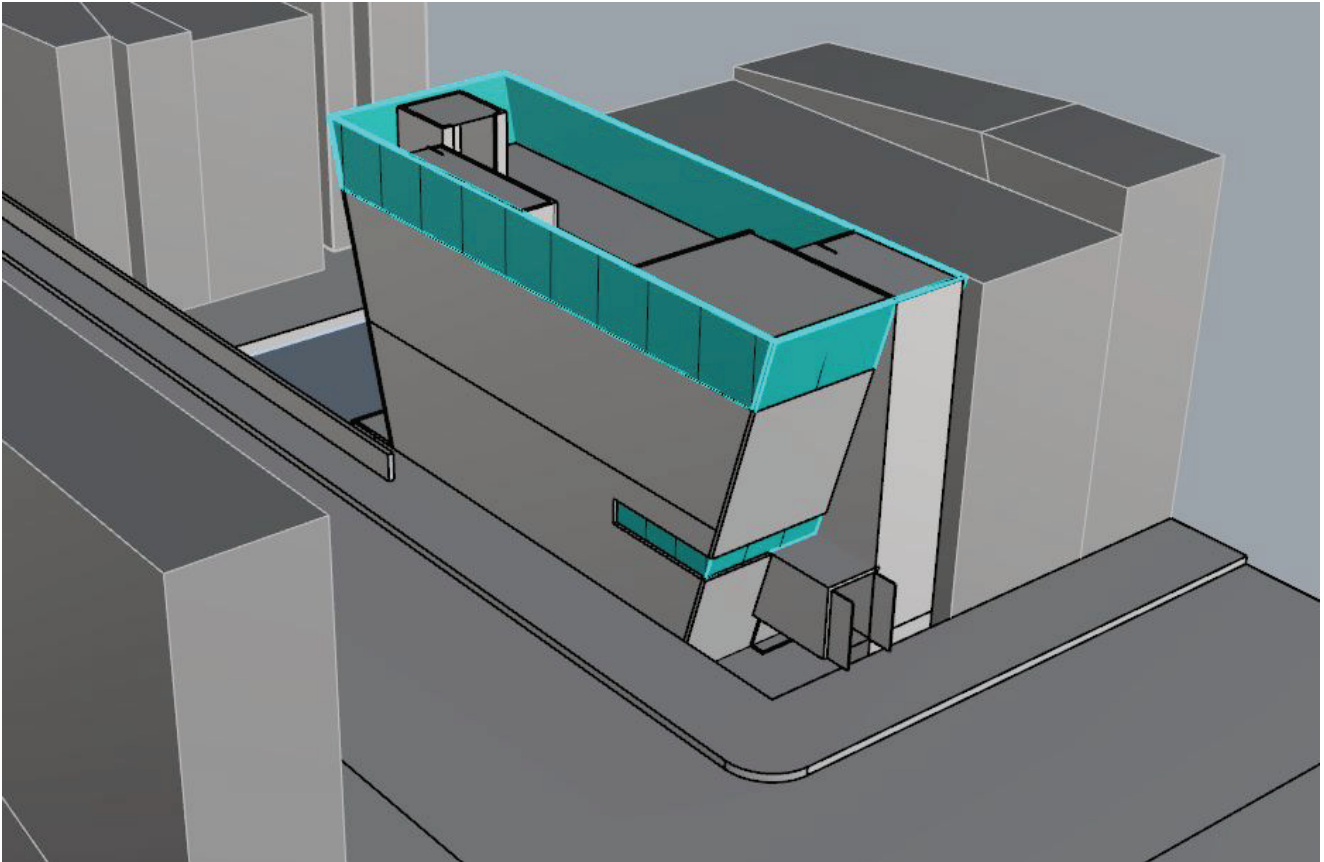
Section BB



Scale 1/64" = 1' N

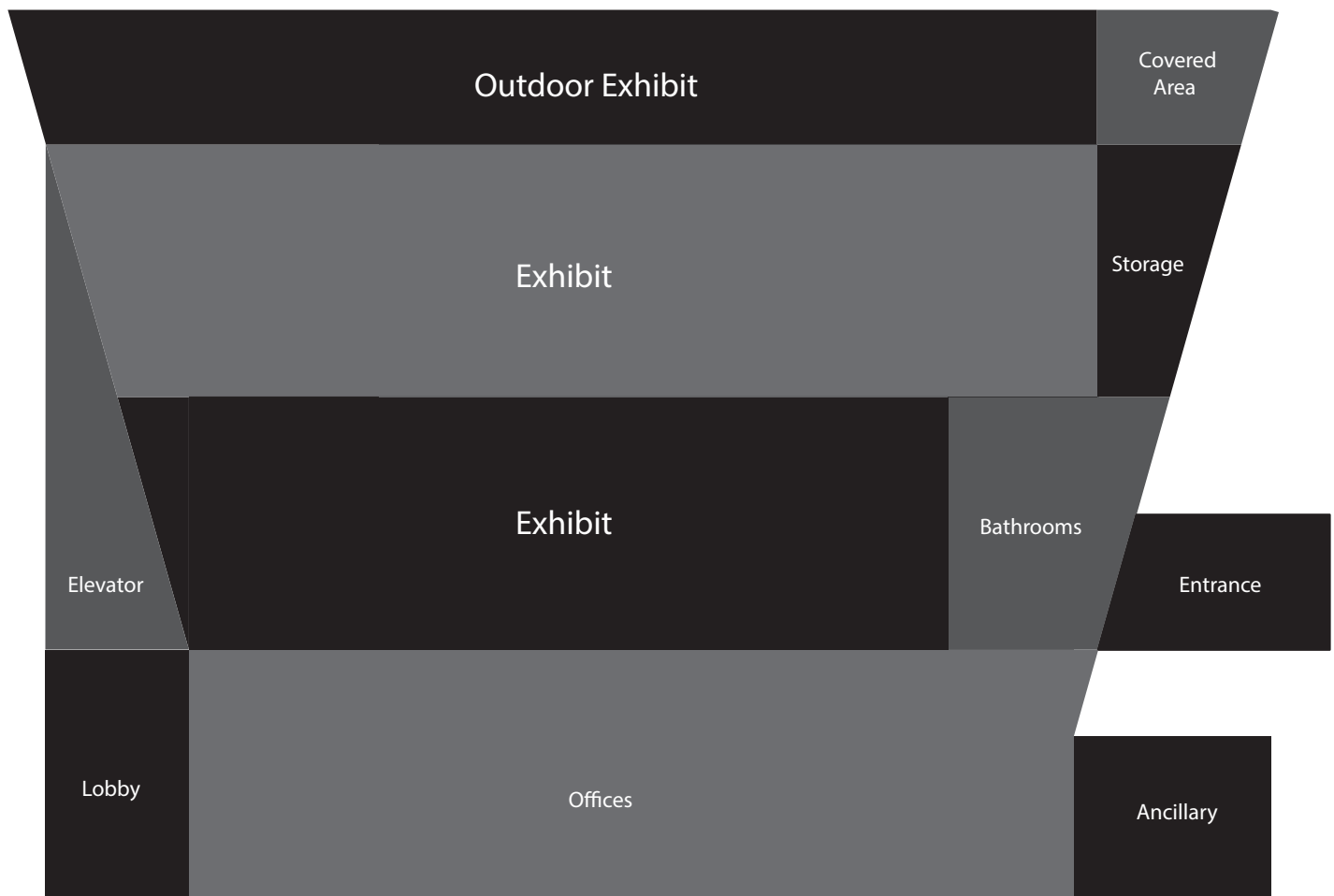
Studio 2: River Walk Museum [Design in Rhino]

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



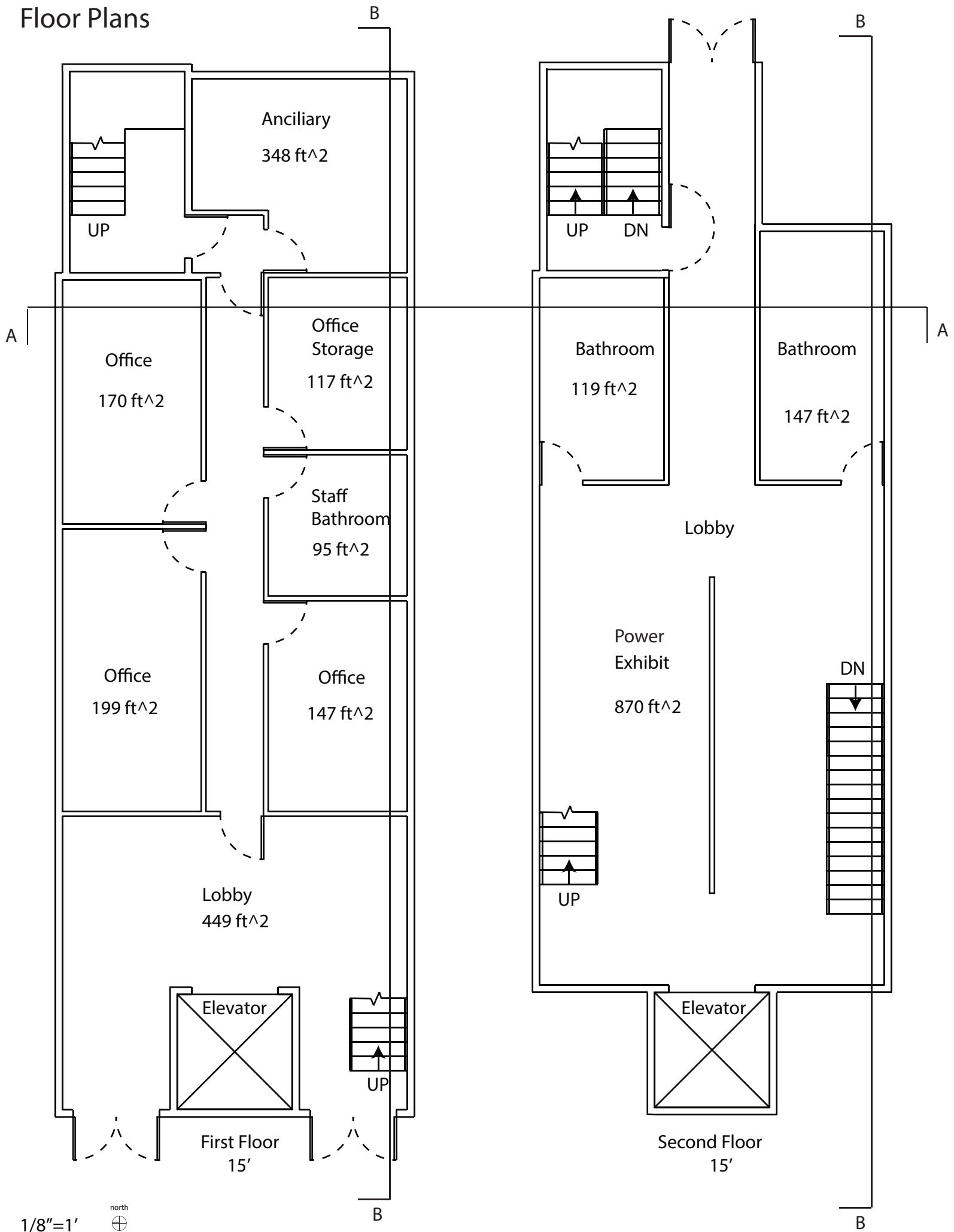
Statement of Intent

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.

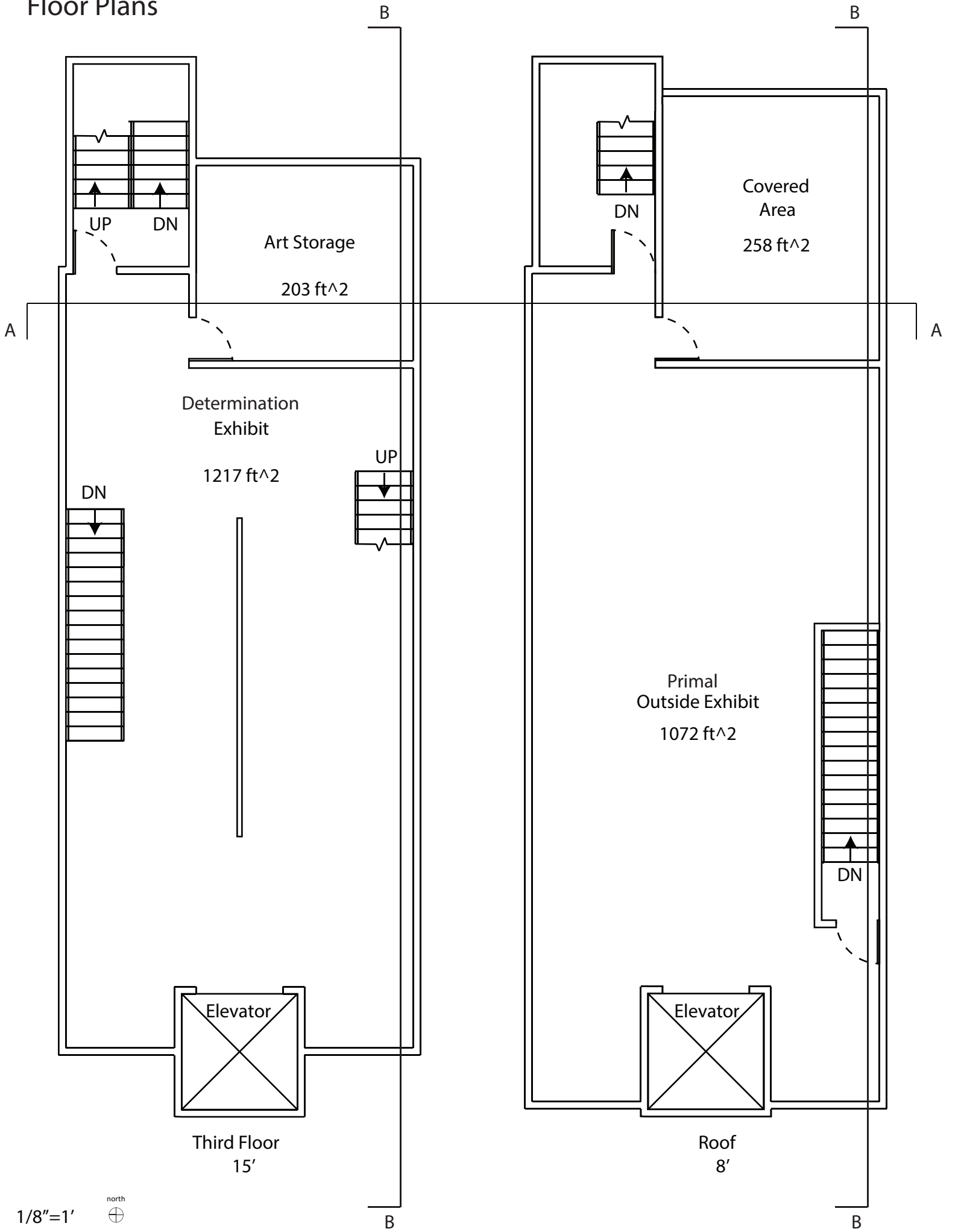


Concept Diagram

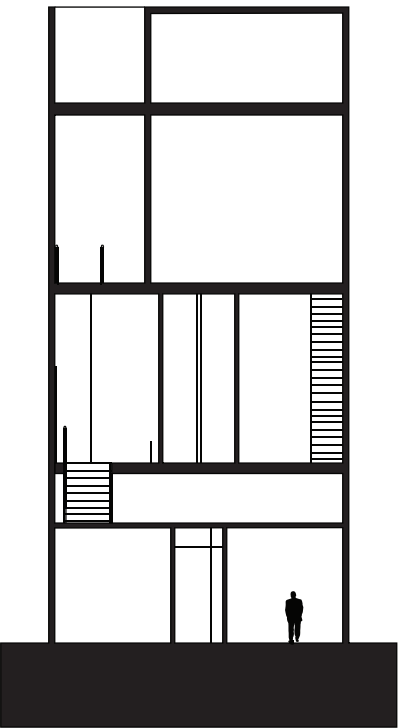
Floor Plans



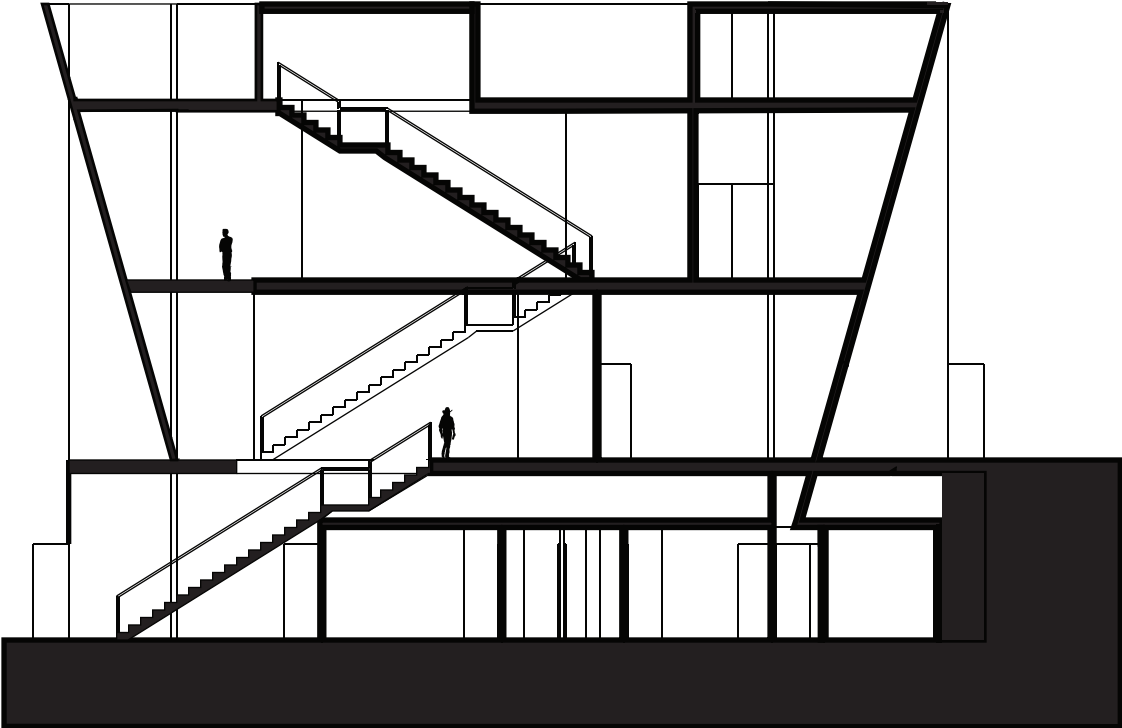
Floor Plans



Sections



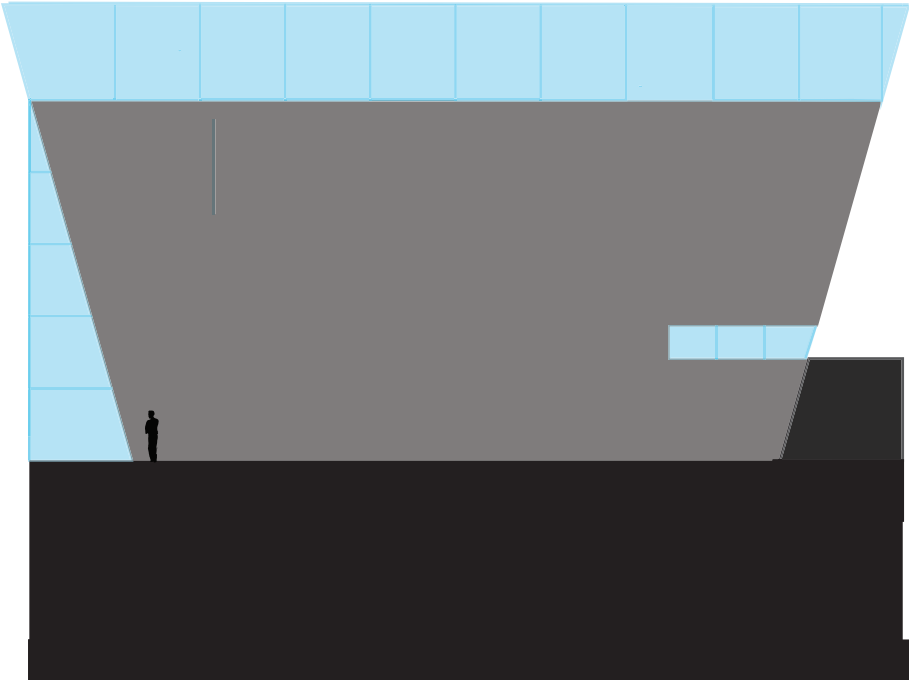
Section A-A



Section B-B

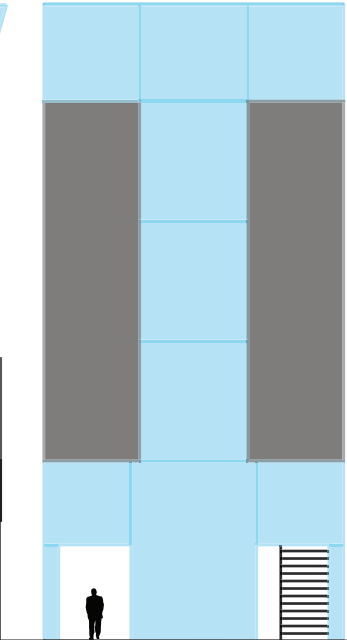
Scale 1/16"=1'

Elevations

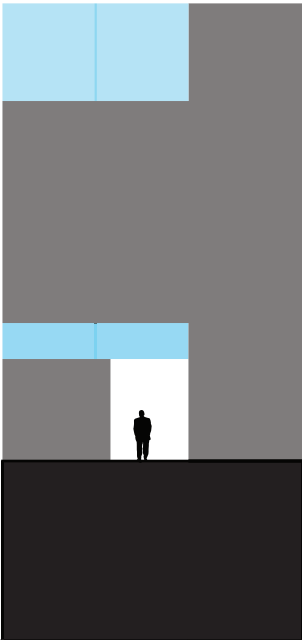


Scale 1/16"=1'

South

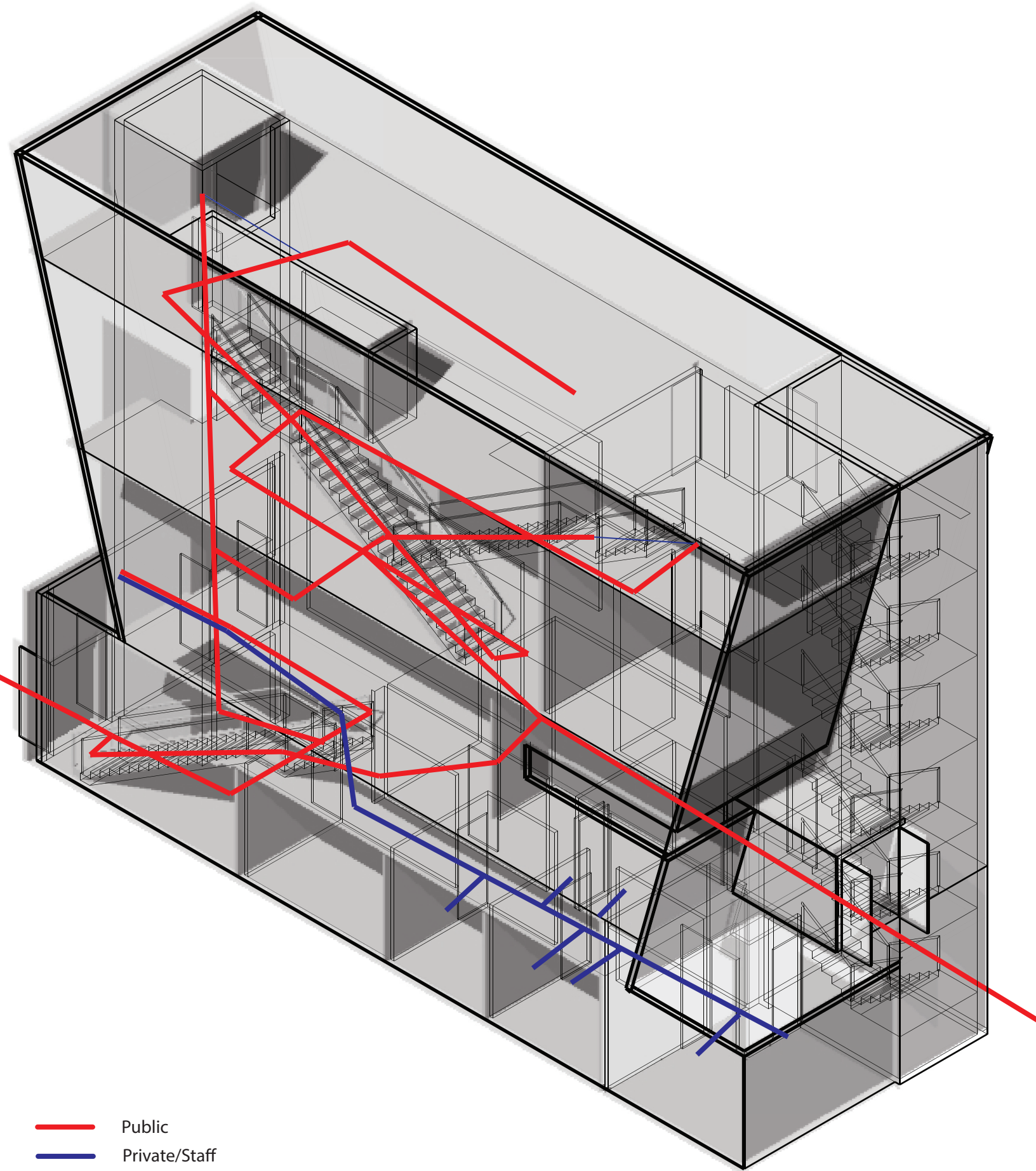


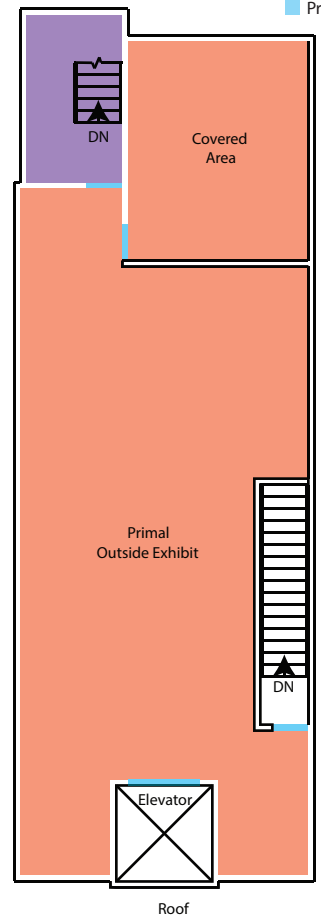
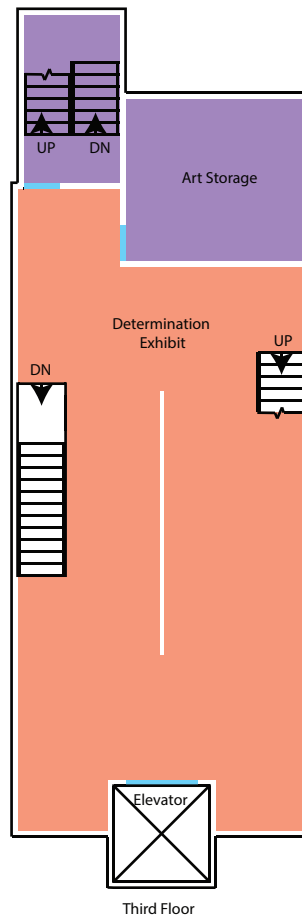
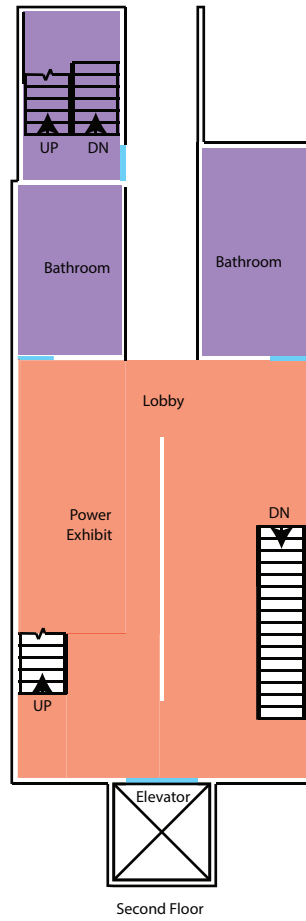
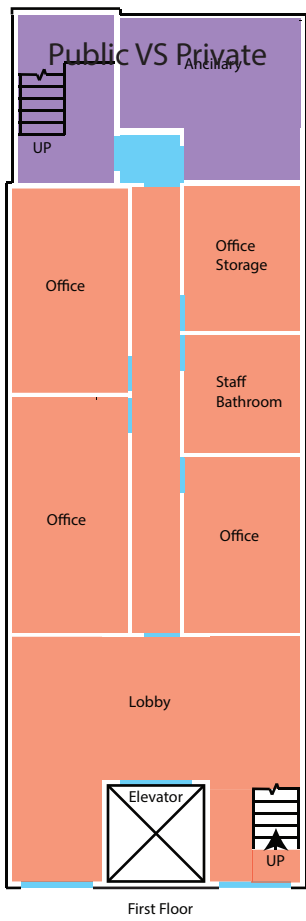
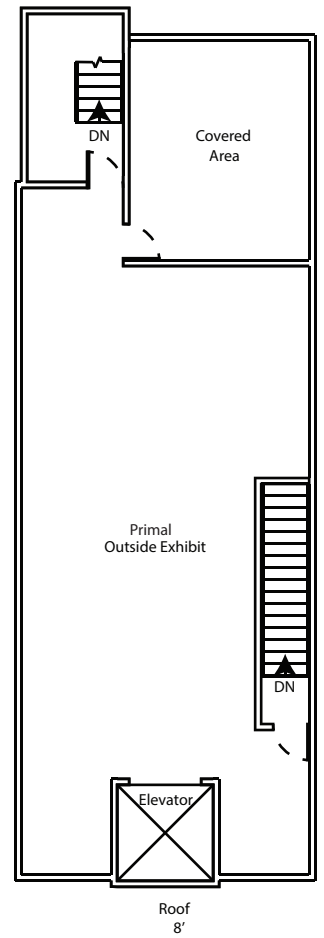
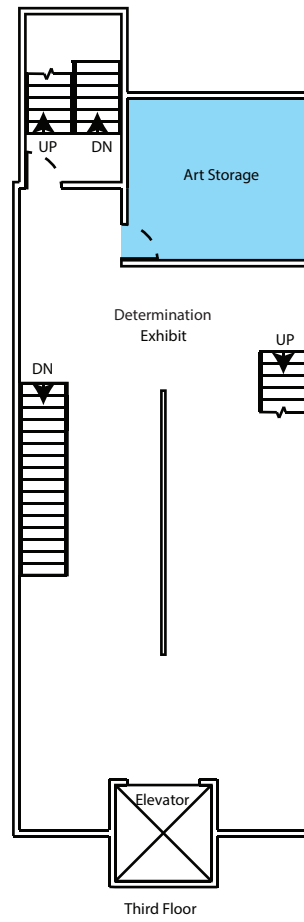
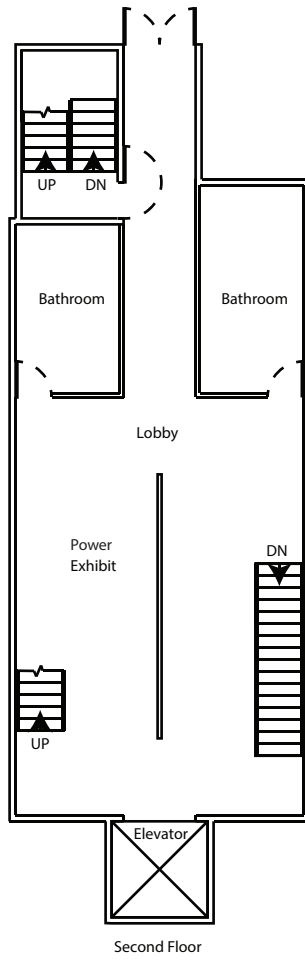
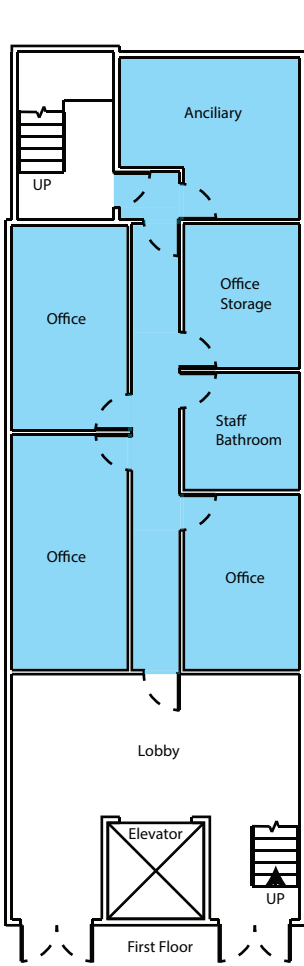
East



West

Path Analysis

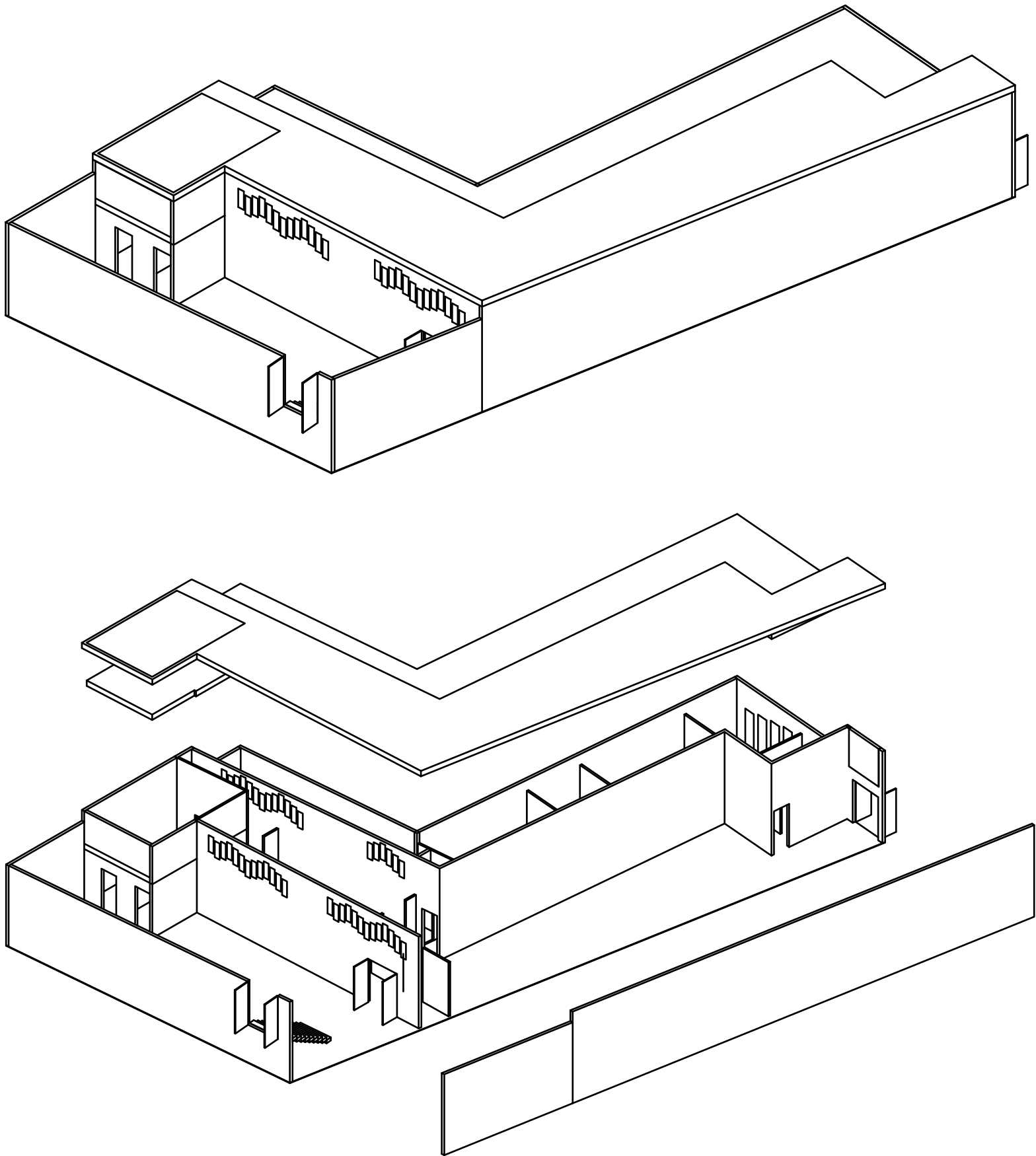




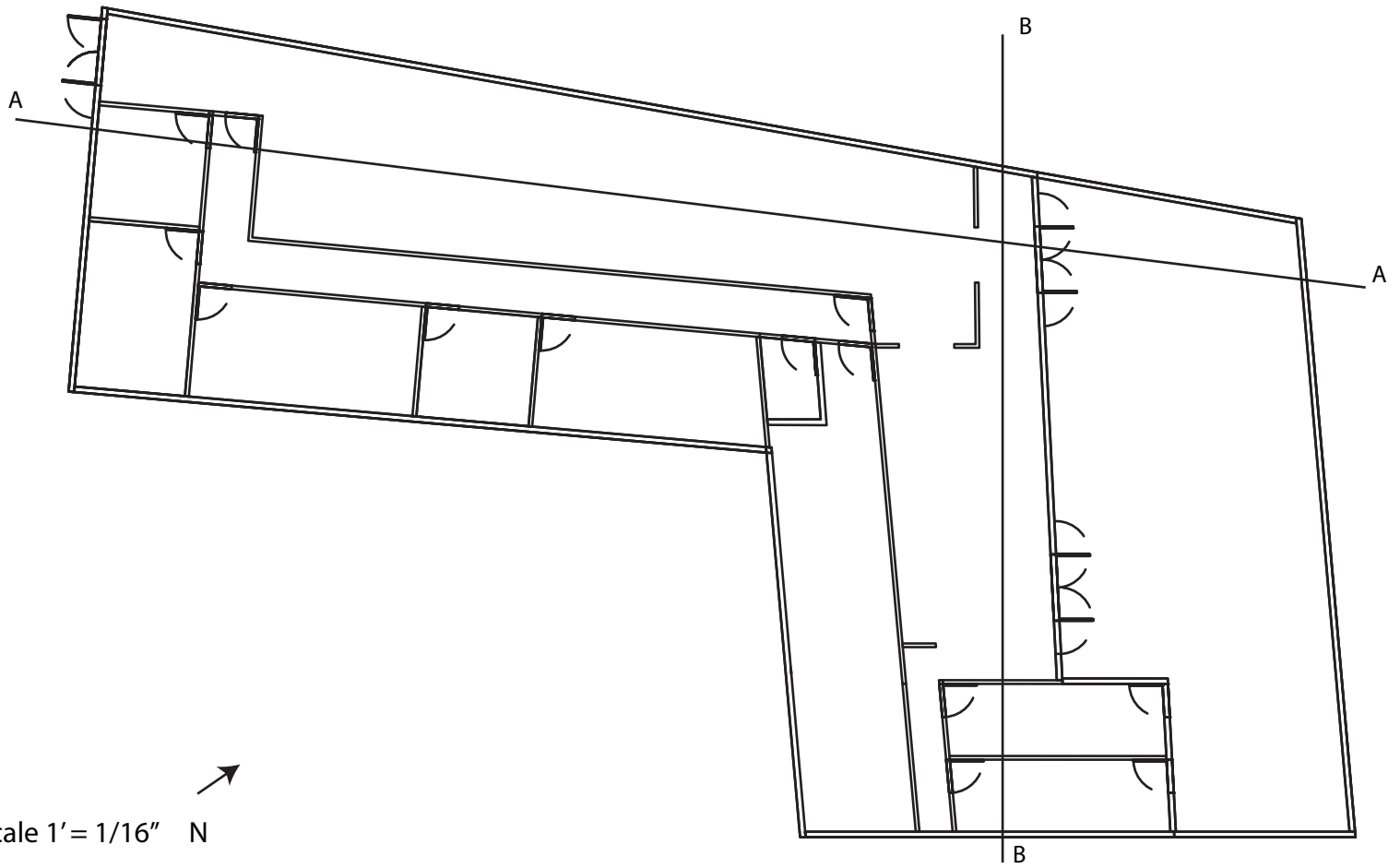
Public
Private

Studio 2: Lubbock Museum
[Design in Rhino]

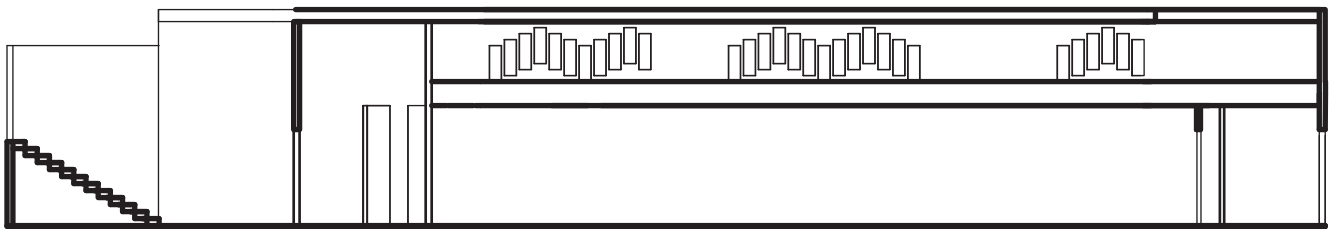
The design project was to design a museum located in Lubbock, TX.



Floor Plan

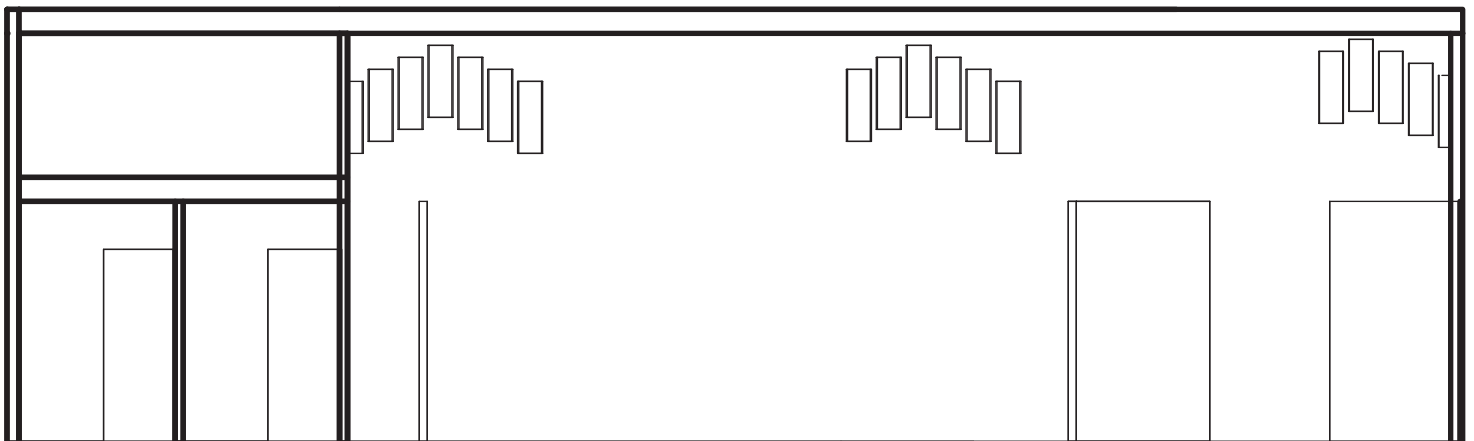


Scale 1' = 1/16" N



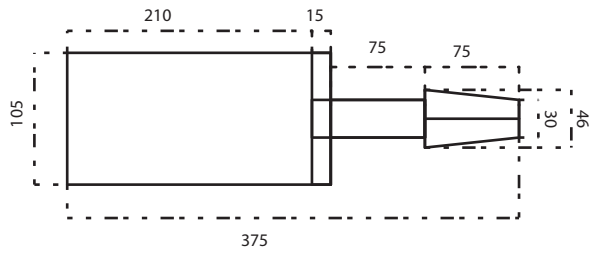
Scale 1' = 1/16"

Section AA

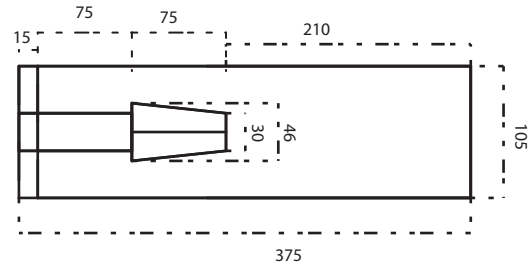


Scale 1' = 1/8"

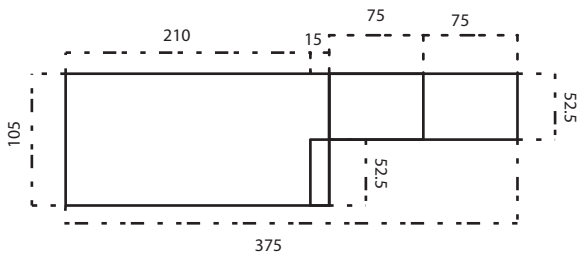
Section BB



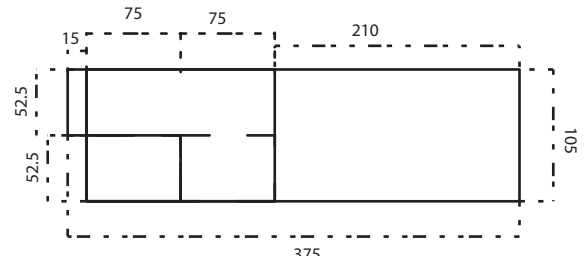
Section



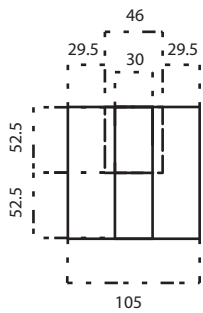
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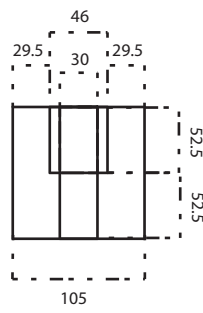
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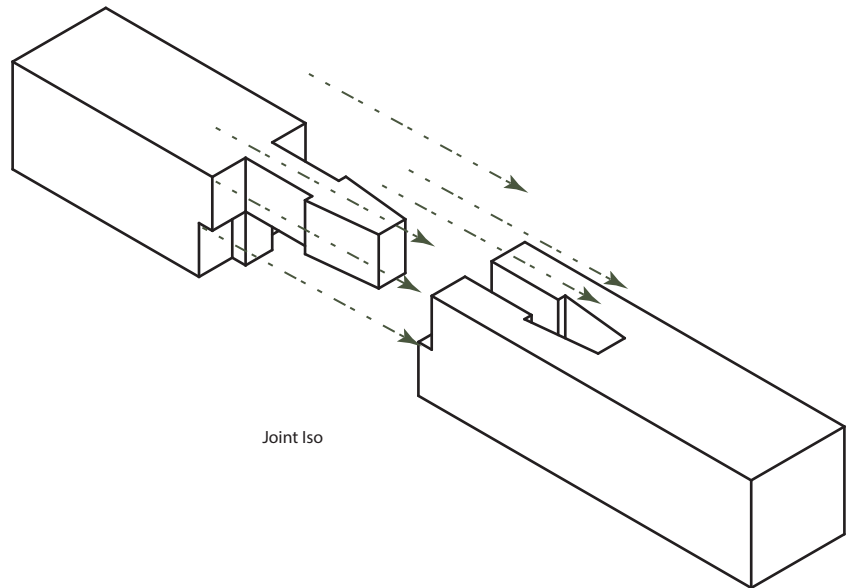
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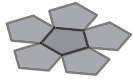
Section



Section



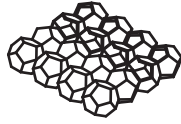
Joint Iso



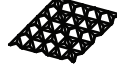
Solids and Voids



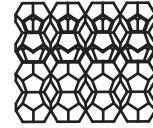
Solids and Voids



Solids and Voids



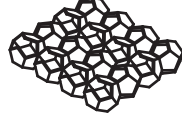
Solids and Voids



Voids



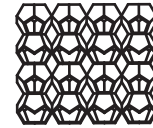
Voids



Voids



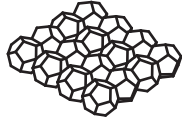
Voids



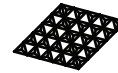
Solids



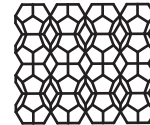
Solids



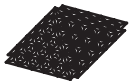
Solids



Solids



Polyhedron Pattern



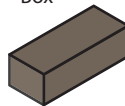
Polyhedron Pattern



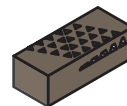
Polyhedron Pattern



Box



Boolean Difference



Boolean Union



Box



Box



Boolean Difference



Boolean Difference



Polyhedron Pattern



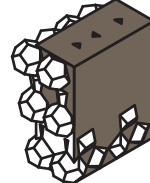
Box



Boolean Difference



Boolean Union



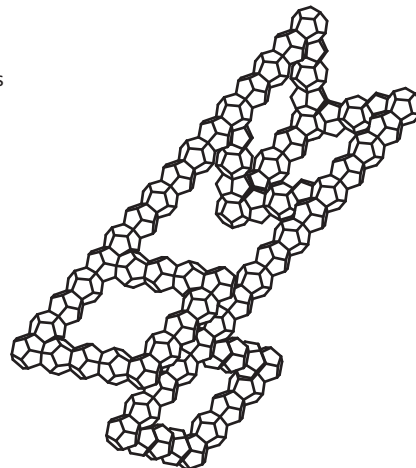
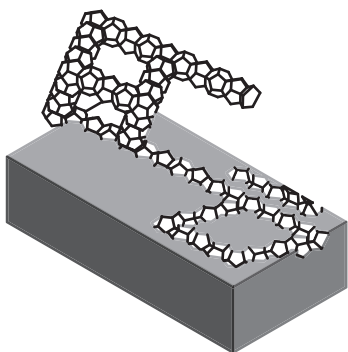
Boolean Union



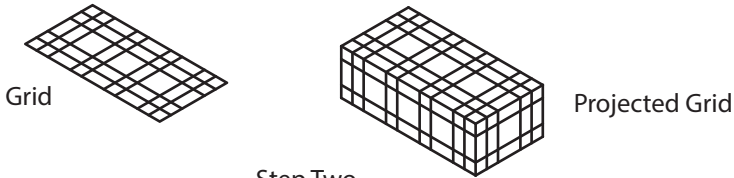
Boolean Union



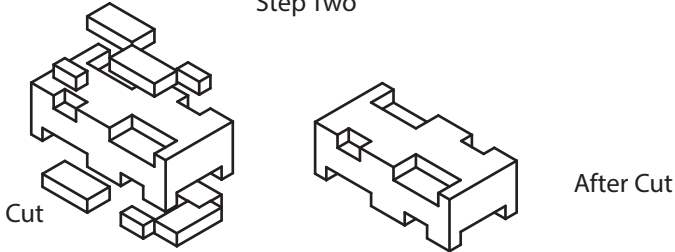
Clusters



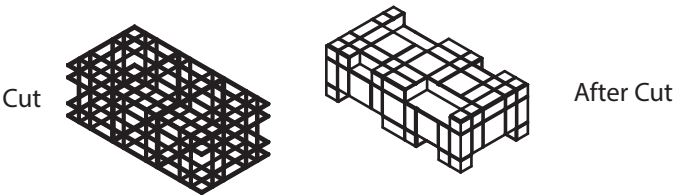
Step One



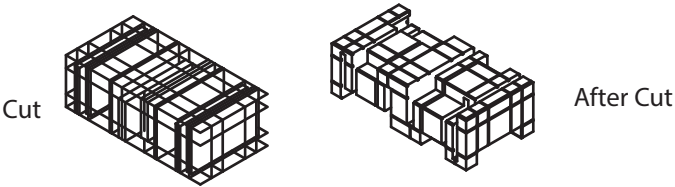
Step Two



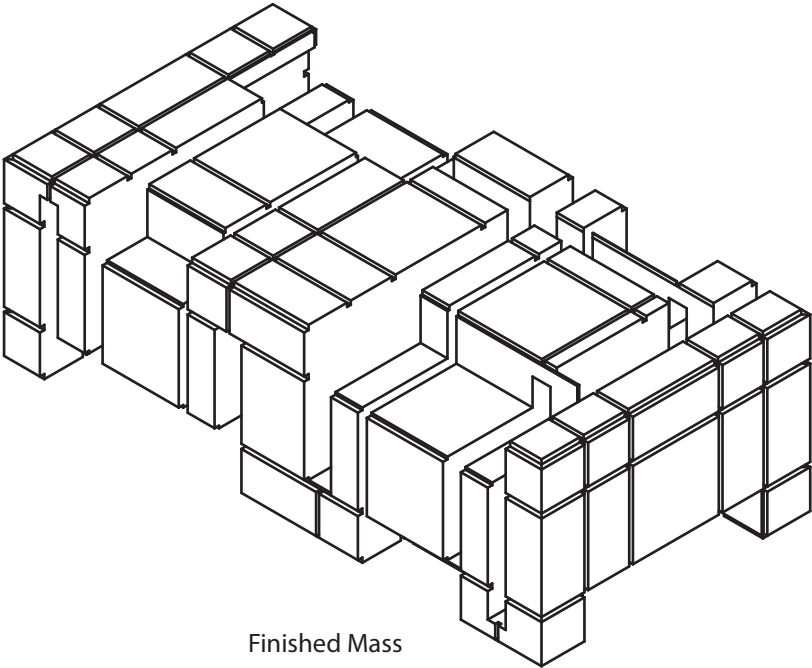
Step Three

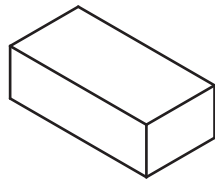


Step Four

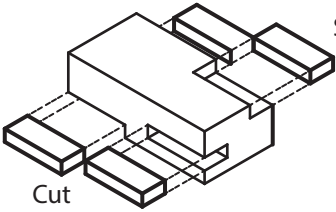


Step Five

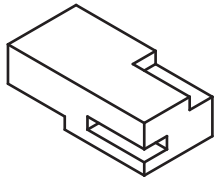




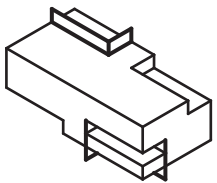
Step One



Cut

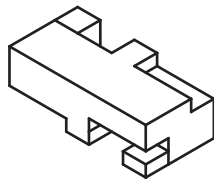


After Cut

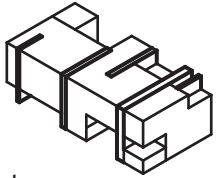


Cut

Step Two

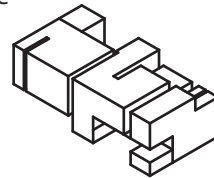


After Cut

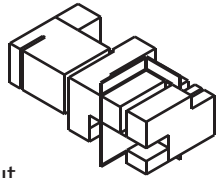


Cut

Step Three

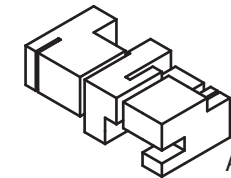


After Cut

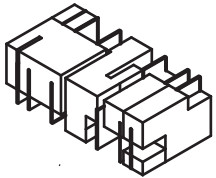


Cut

Step Four

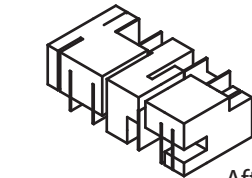


After Cut

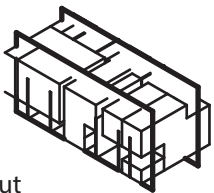


Cut

Step Five

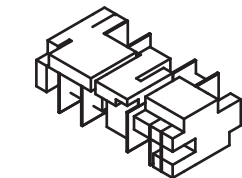


After Cut

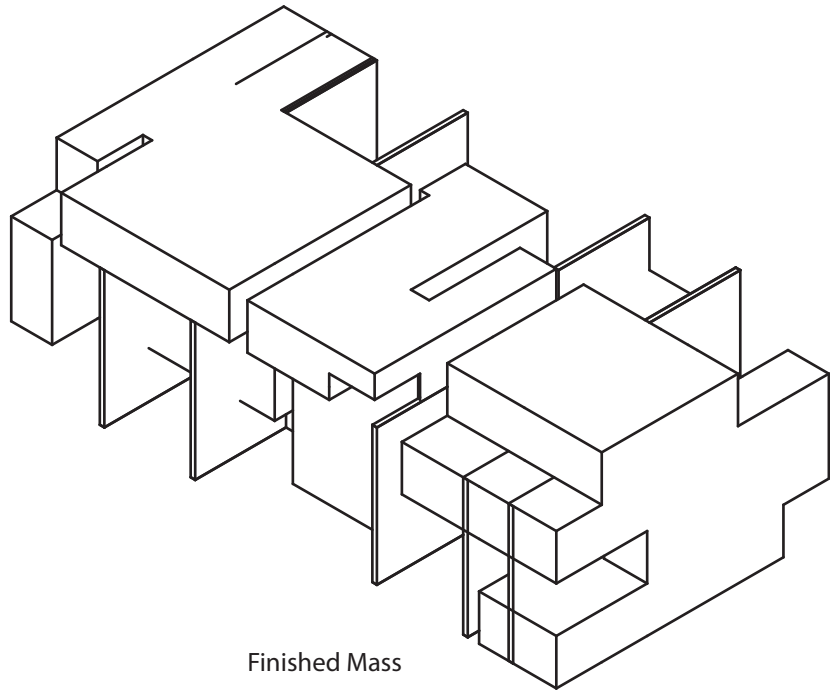


Cut

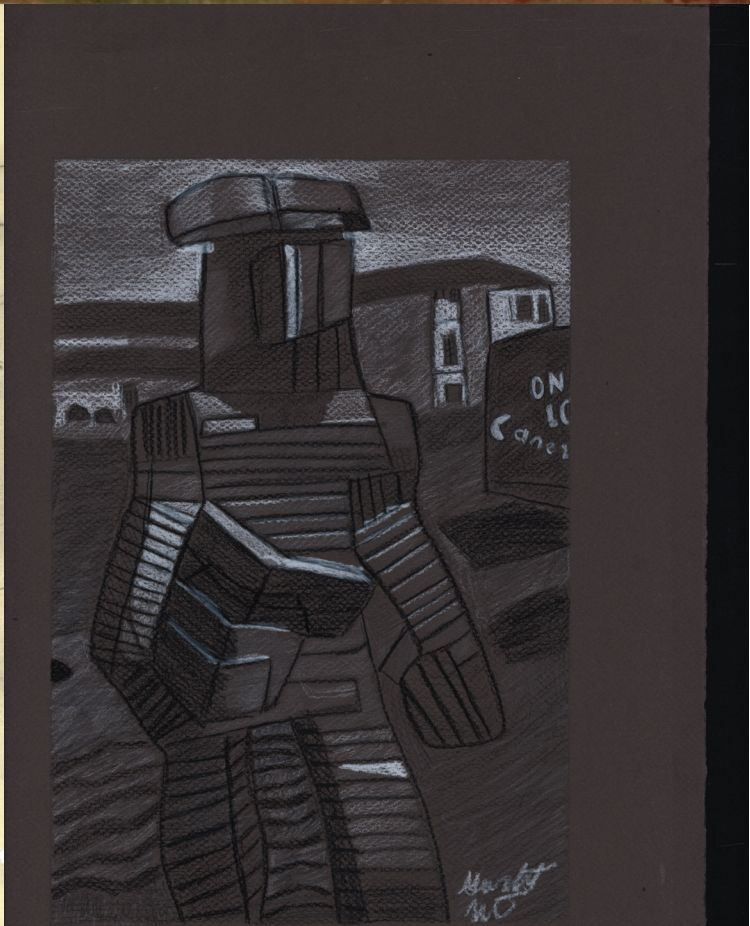
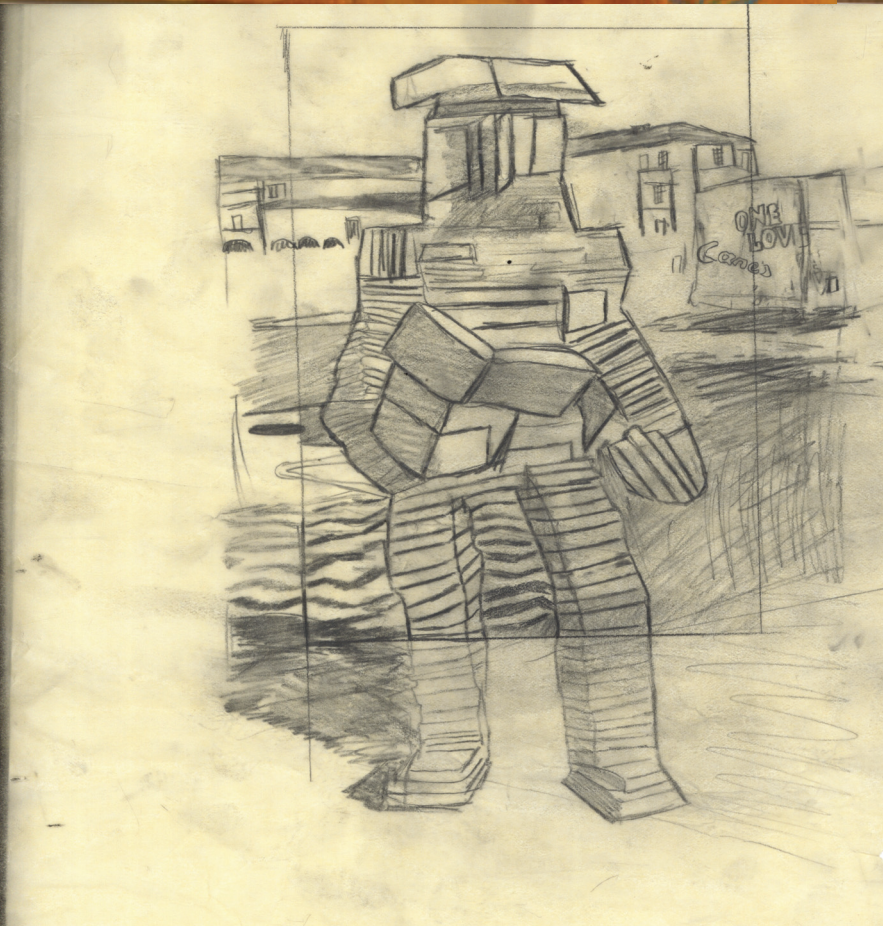
Step Six



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.



