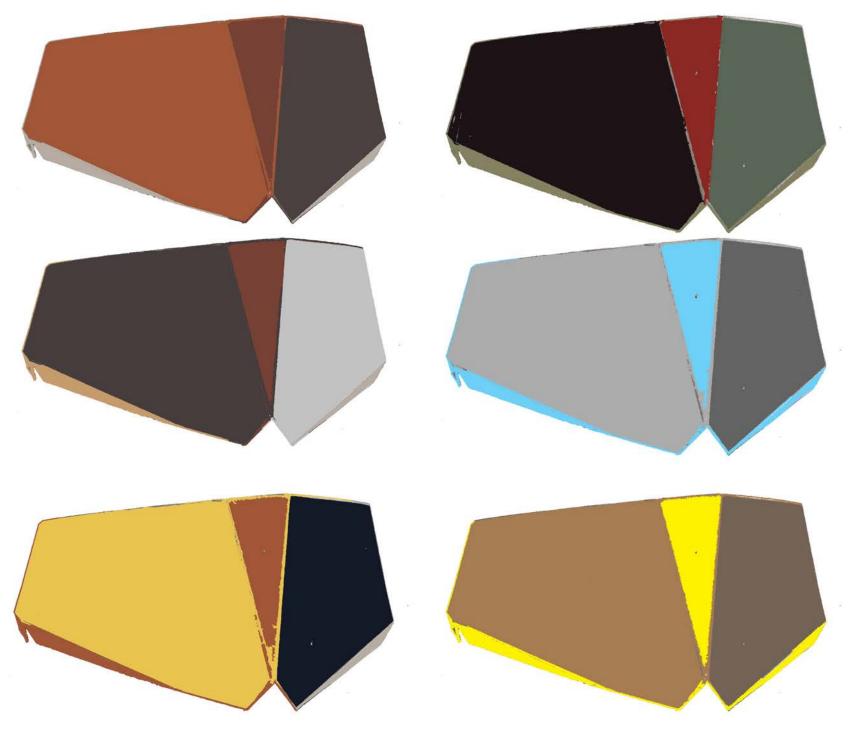
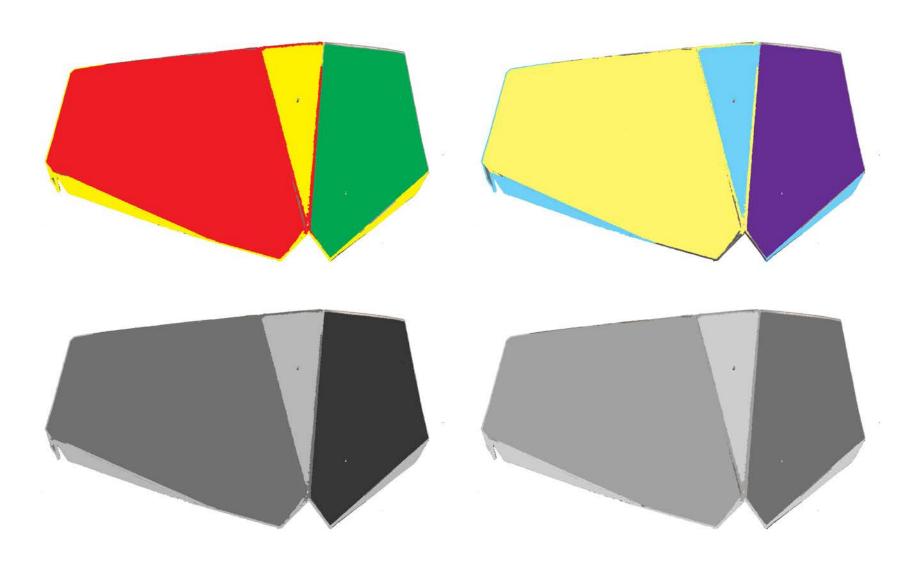


Architectural Design I, AAE380 — Fall 2012 Student Portfolios — Deborah Oakley Section

Pedro Borquez3
Ron Cano
Emylanie Carnate31
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Abigail Garcia73
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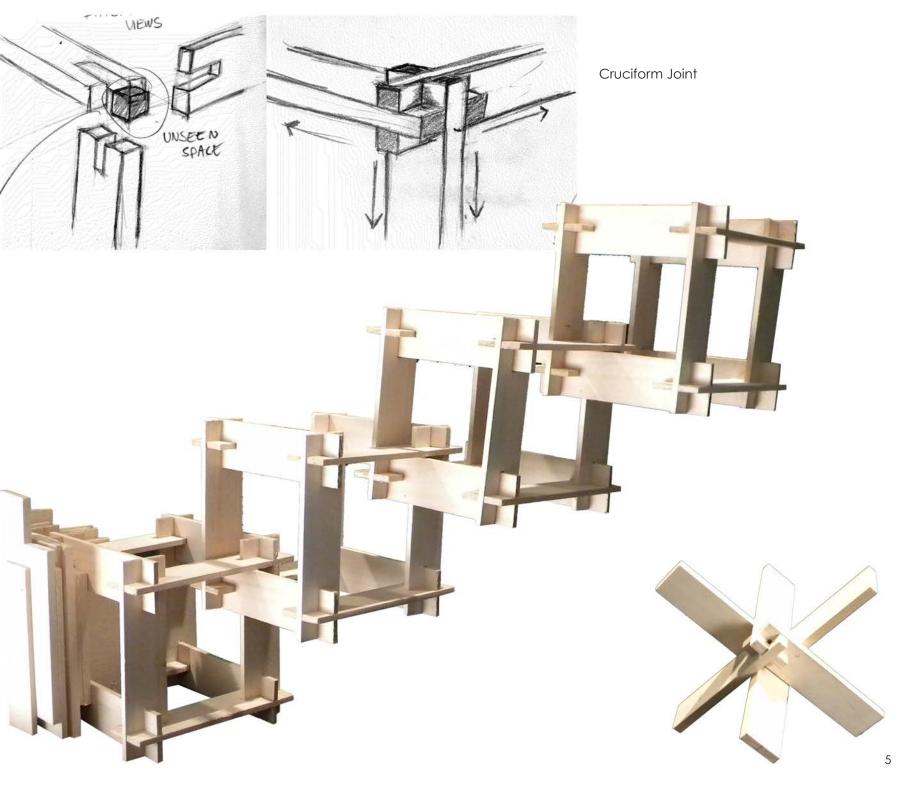


<u>Pedro Borquez</u>

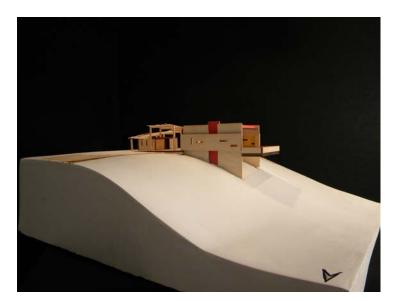
AAE 380 Architectural Design 1

2 Assemblages + 1 Joint

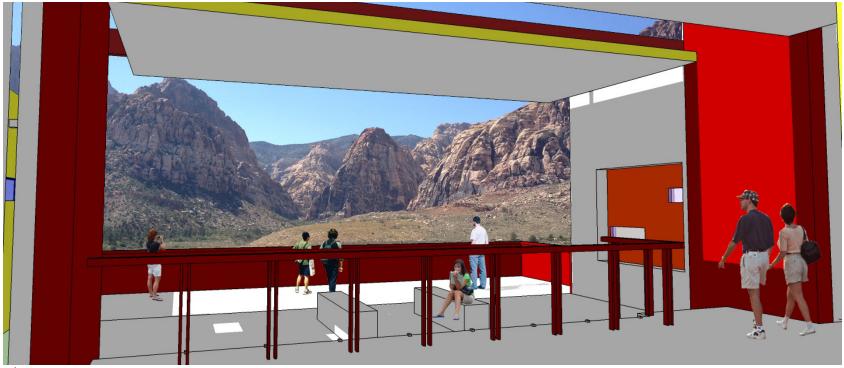




Pinecreek Trailhead Pavillion













Purpose: Trailhead Pavillion

Context: Pinecreek Trail Red Rock

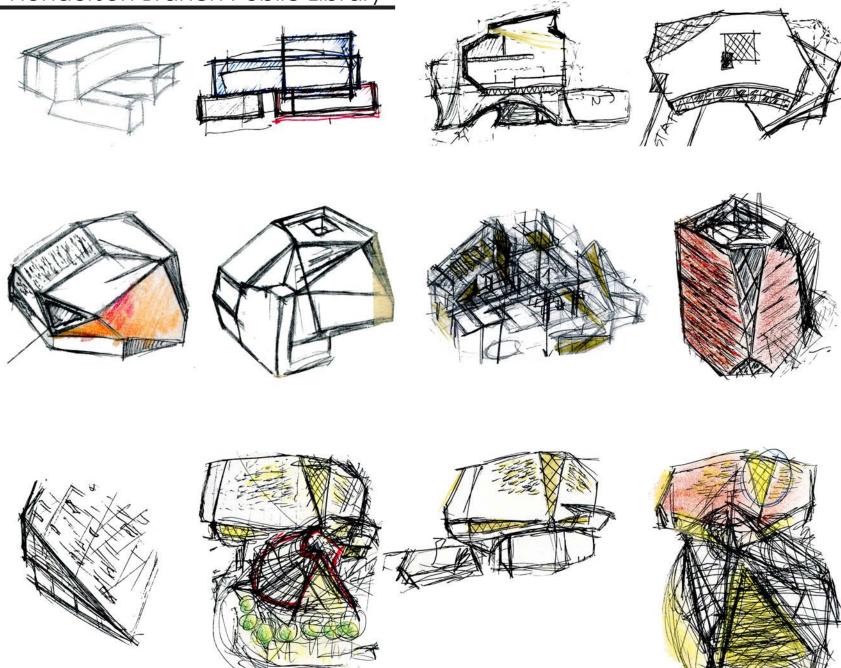
Canyon; Las Vegas, NV

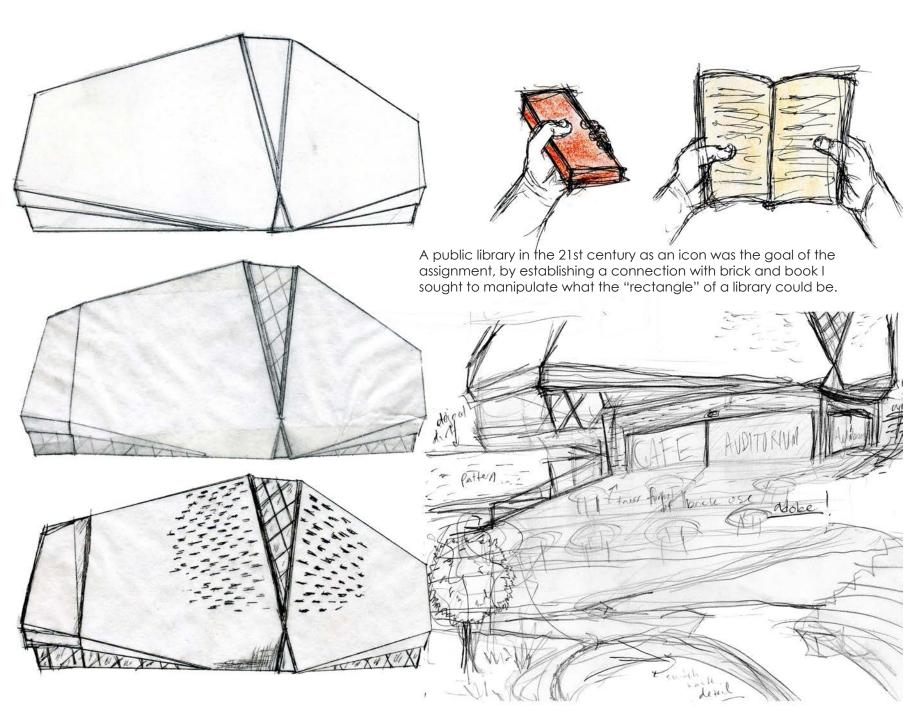
Intent: Establish flat surfaces that are activated with the balance of differ-

ent

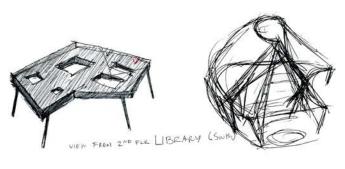
textures of stucco and play of light

Henderson Branch Public Library



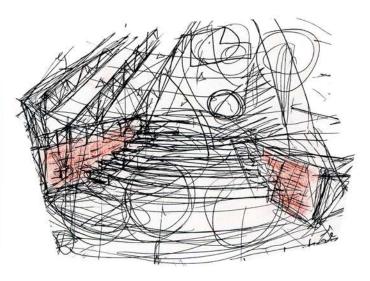


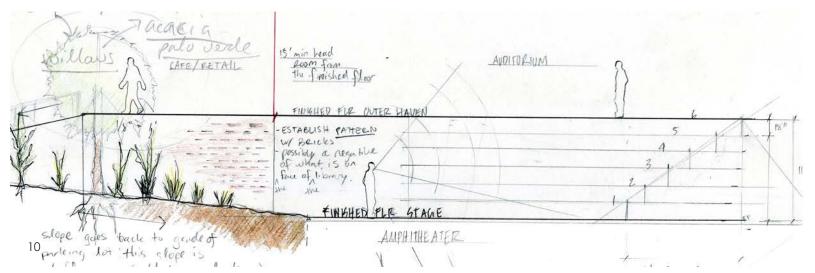


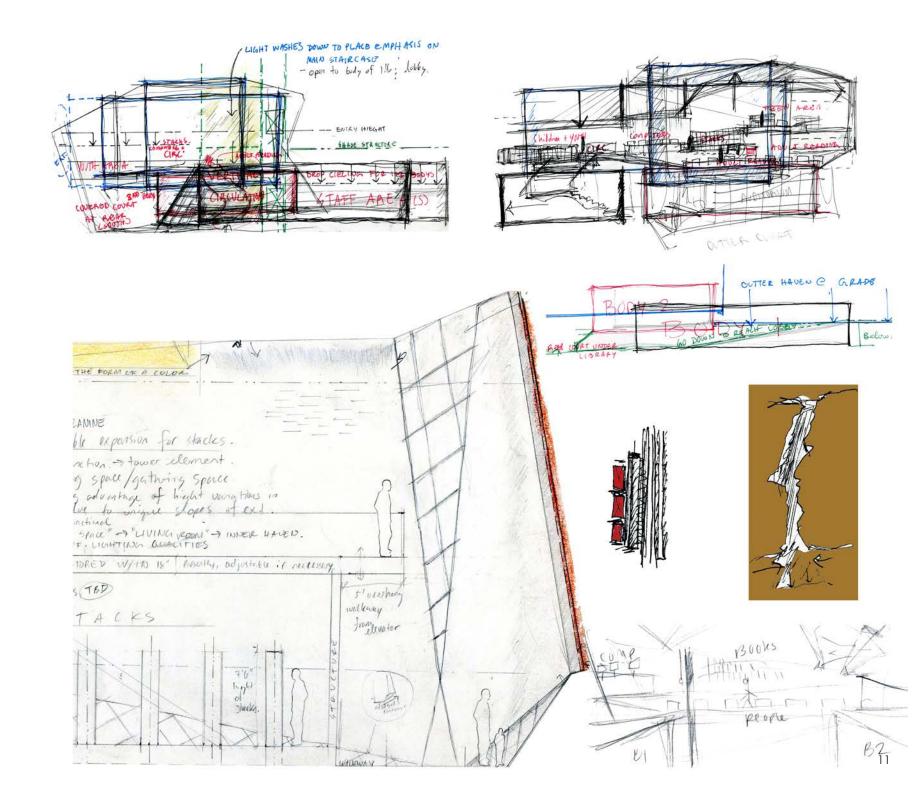




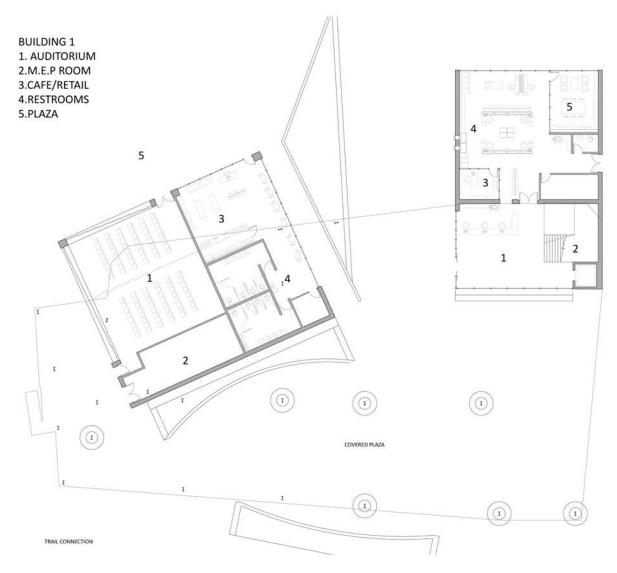










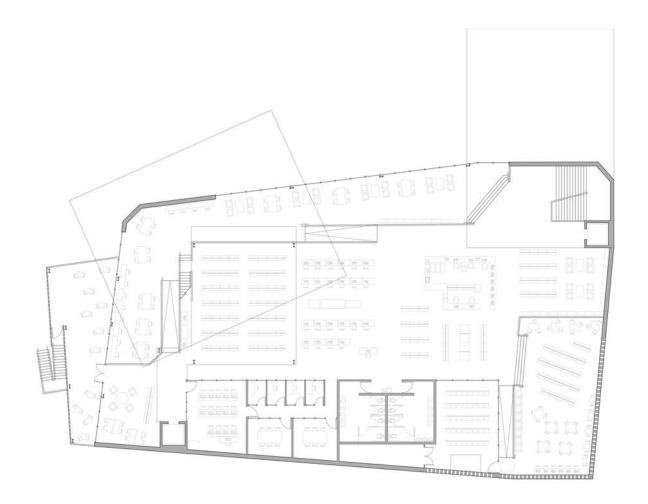


BUILDING 2 1. LOBBY 2.ENTRY STAIRCASE 3.LIBRARIANS OFFICE 4.WORKSPACE 5.KITCHEN

CHILDRENS PARK







BODY OF LIBRARY

1.ENTRY STAIRCASE

2.NEW BOOKS/PERIODICALS

3.YOUTH AREA

4.STORYTIME

5.AUDIO VISUAL/REFERENCE

6.CIRC DESK

7.PUBLIC COMPUTER AREA

8.STACKS/MEZZANINE LEVEL

9.RESTROOMS

10.STUDY ROOMS

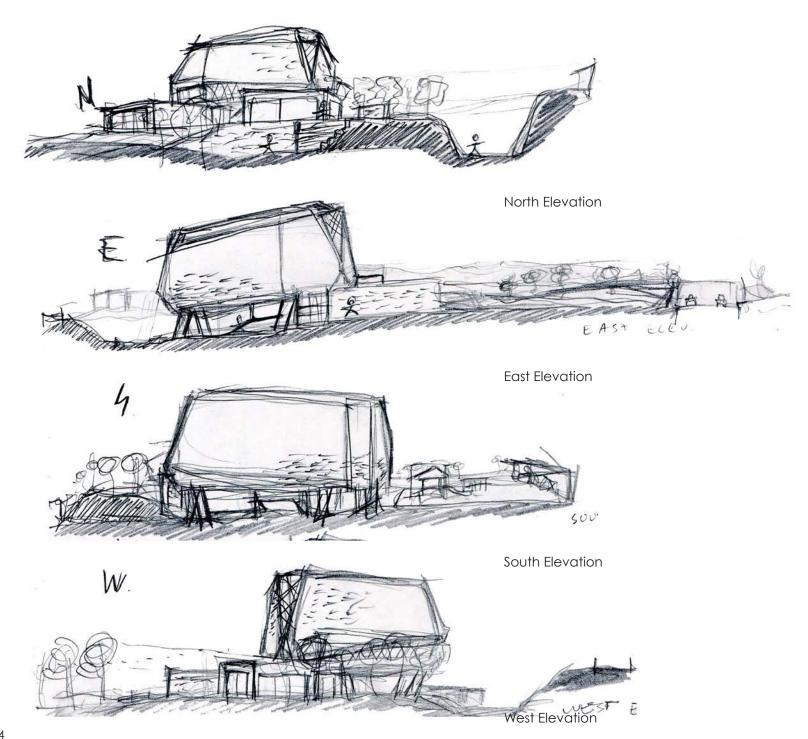
11.TEEN COMPUTER AREA

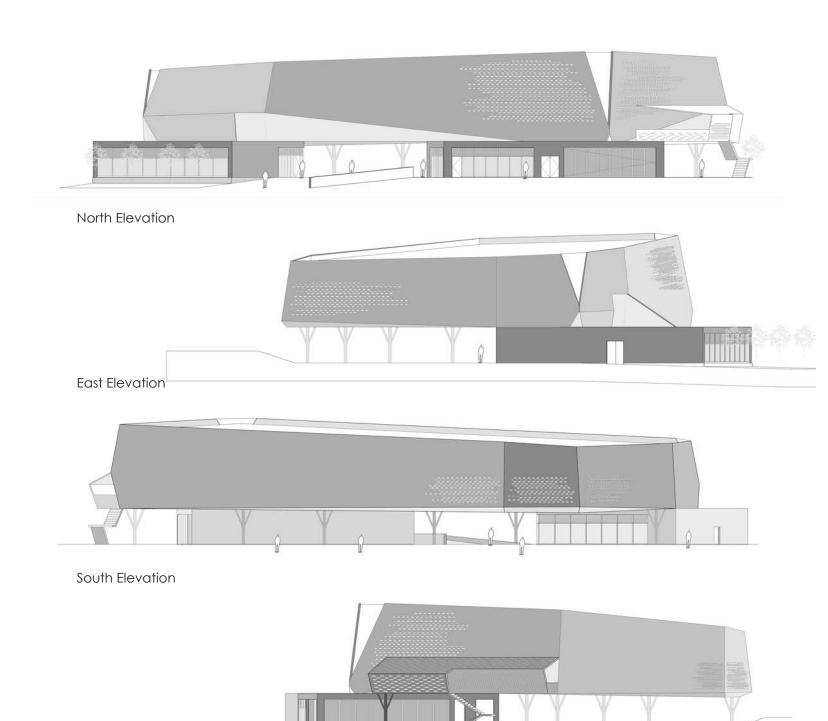
12.TEEN AREA

13.ADULT READING AREA

14.OUTDOOR COURTYARD

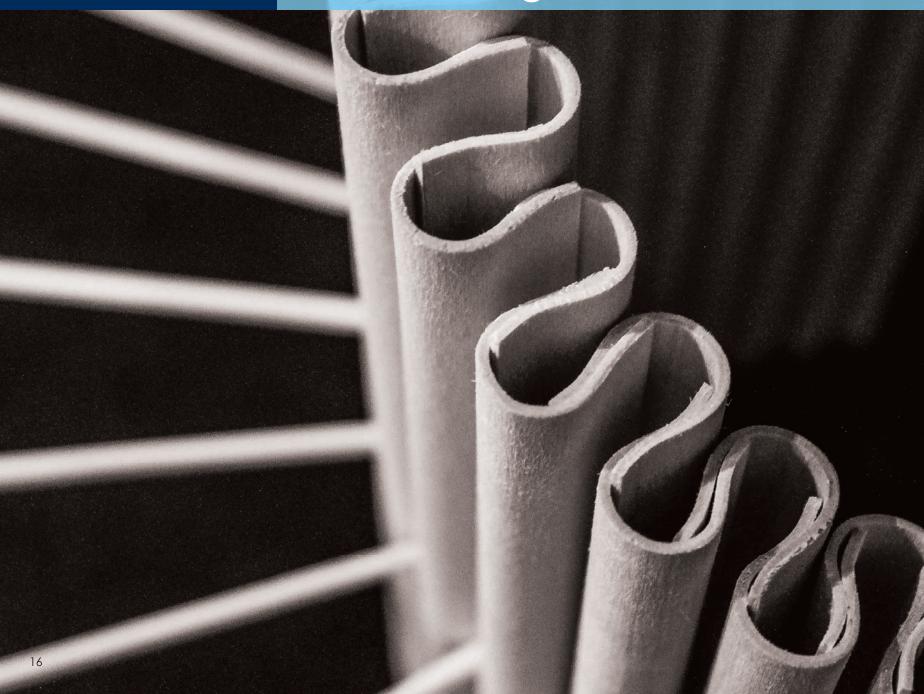




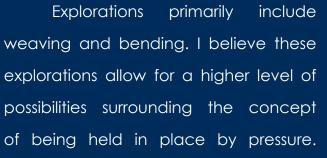


West Elevation

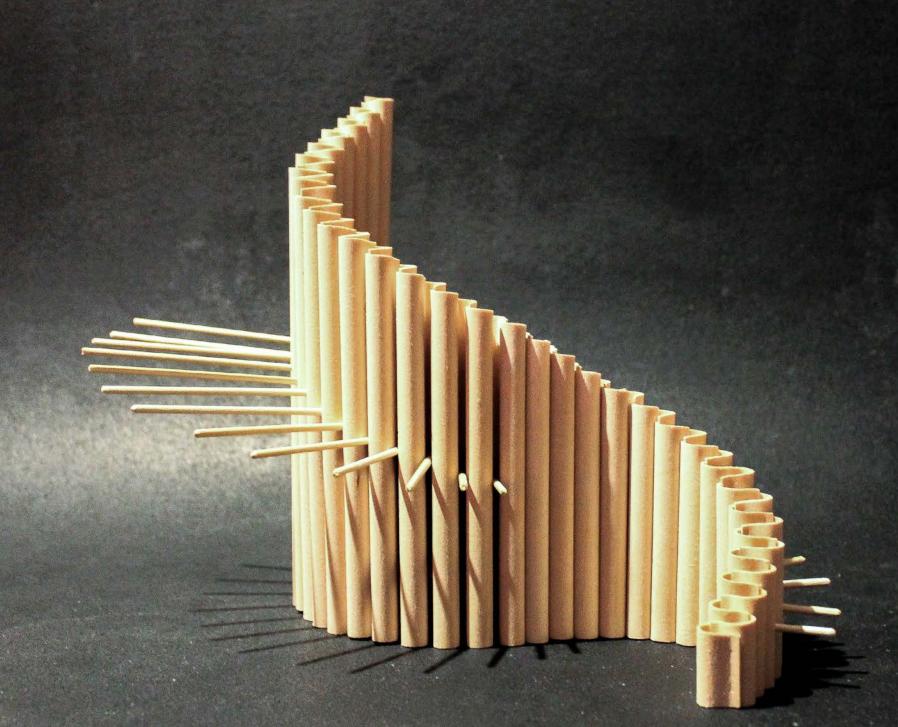
PROJECT 1: 2 Assemblages + 1 Joint







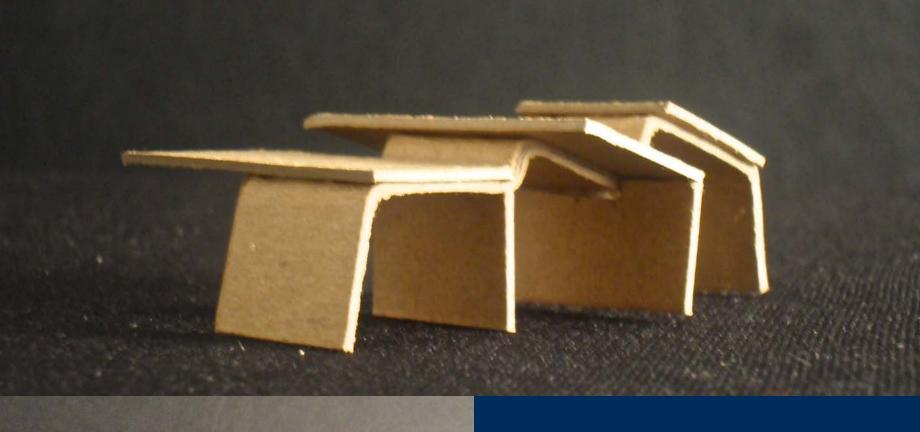


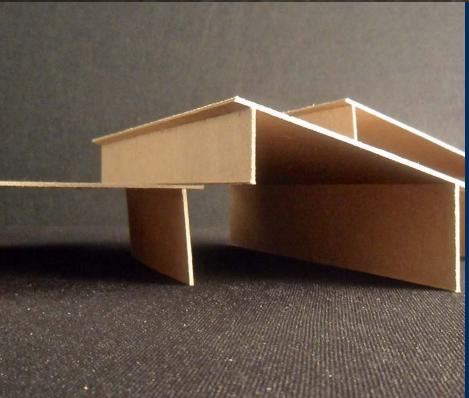


Ronald Cano Jr.

PROJECT 2: Pine Creek Trailhead



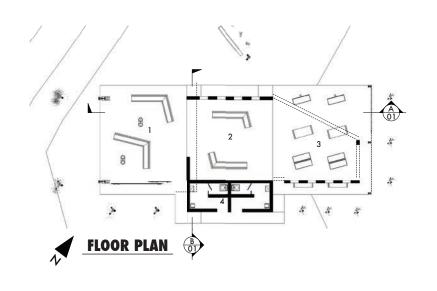


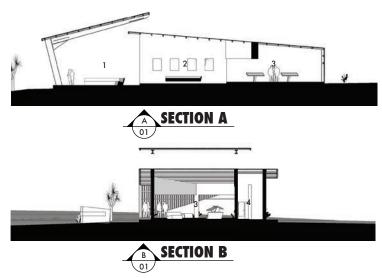


A trailhead that provides a place of rest and refuge is the main focus of this project. Complete analysis of the site is considered—from grade slope to solar orientation. An open floorplan allows for natural ventilation, which is enhanced by the two-pitched roof angles.

Materials consist of stone walls, concrete foundation, and metal roofing. These materials echo the natural materials found in the desert landscape. The coolness of the blue-colored roof evokes a sense of calmness and refuge. The texture of the stone confirms the desert landscape by the concept of "place".

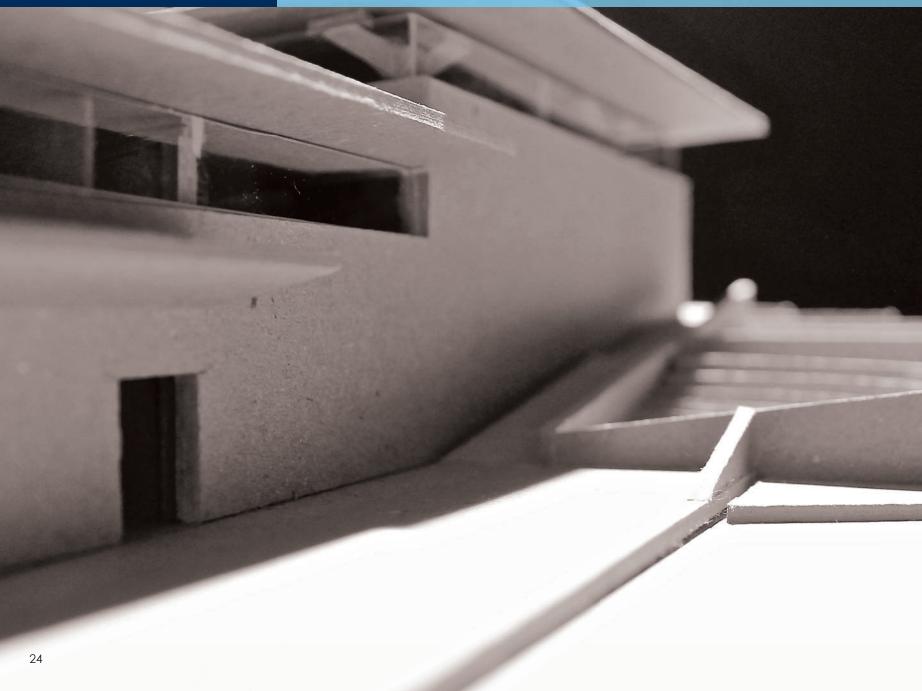






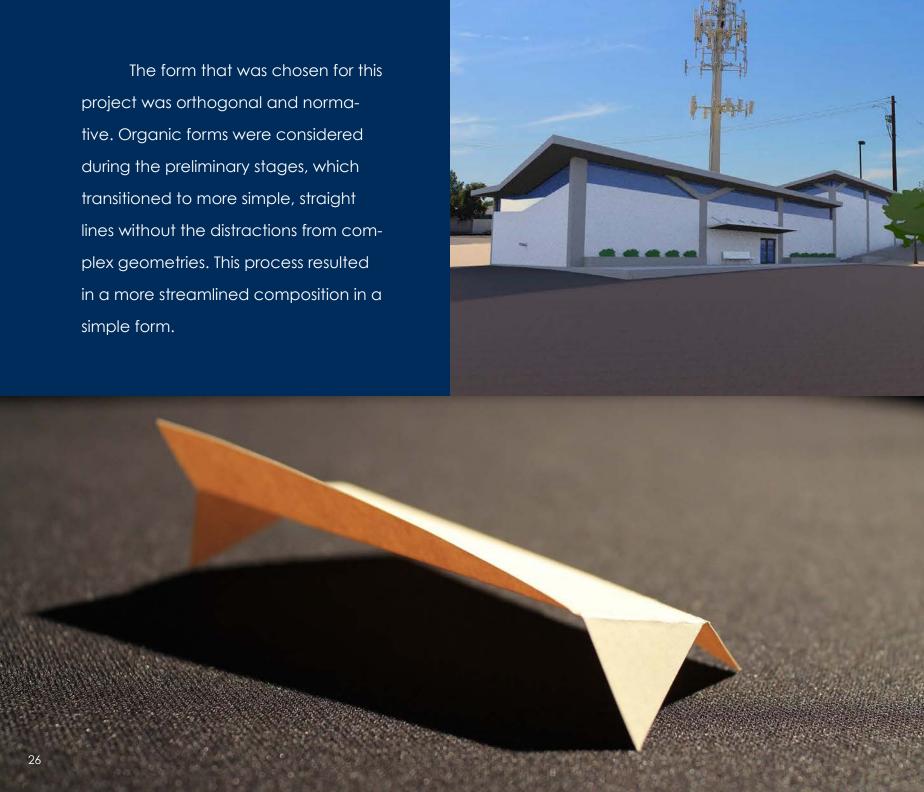


PROJECT 3: Henderson Branch Library





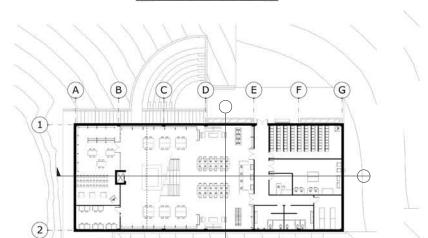
Like Project 2, this project requires consideration of in-depth site analysis as well as library precedents. Phoenix library visits provided a greater understanding of key programmatic areas, such as room relationships and controlled lighting. In addition, the structure of the library was explored in order to create an open reading area without the use of interior columns.



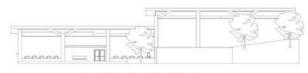




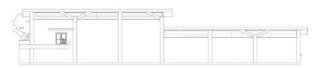
SECOND FLOOR PLAN



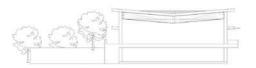
FIRST FLOOR PLAN



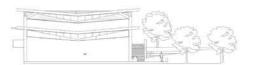
NORTH ELEVATION



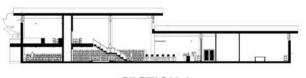
SOUTH ELEVATION



WEST ELEVATION



EAST ELEVATION

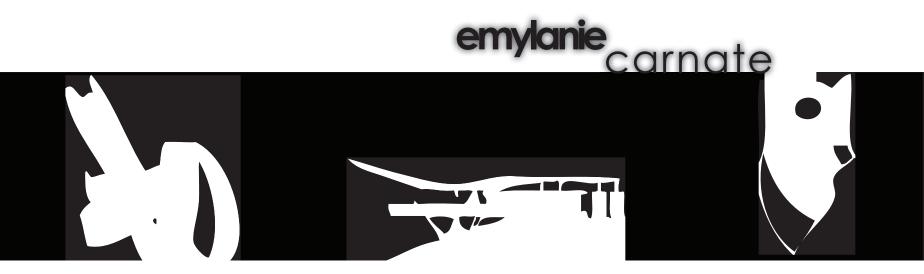


SECTION A

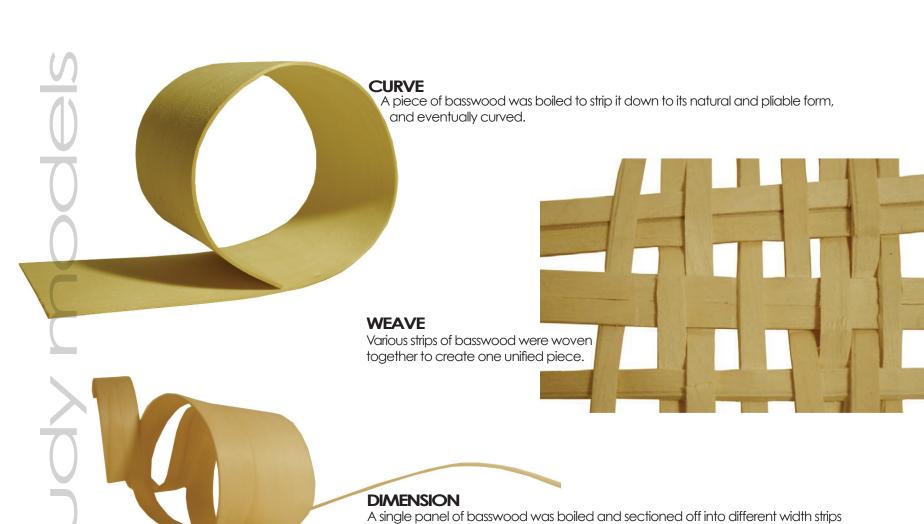


SECTION B



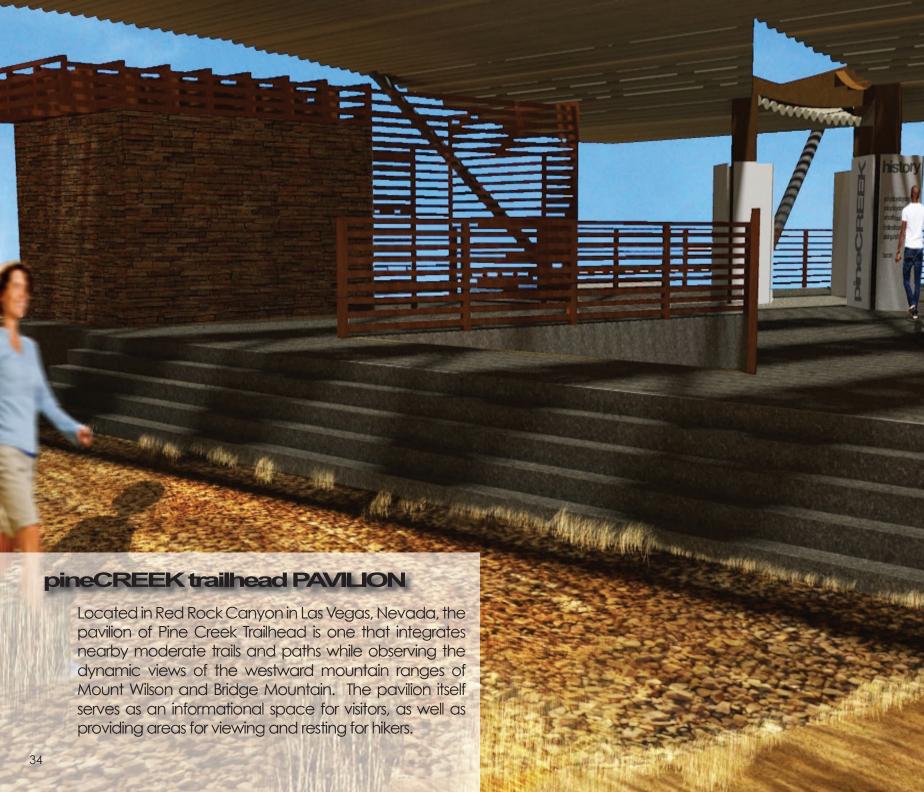


twoASSEMBLAGES + oneJOINT



that were curved in various directions to create a sense of dimension and depth.





southeast elevation not to scale

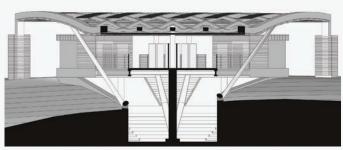
ection cuts

southeast section

southeast section not to scale



southwest elevation not to scale



southwest section not to scale

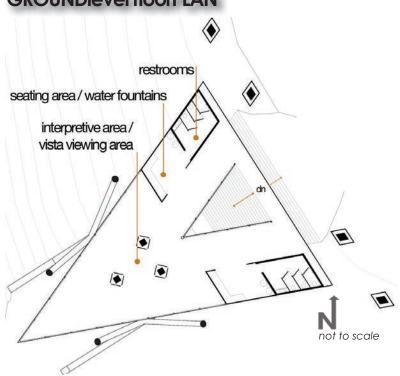


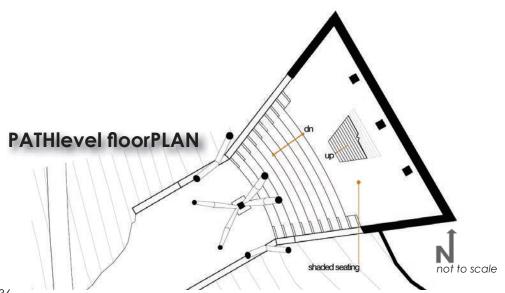
northeast elevation not to scale



northeast section not to scale

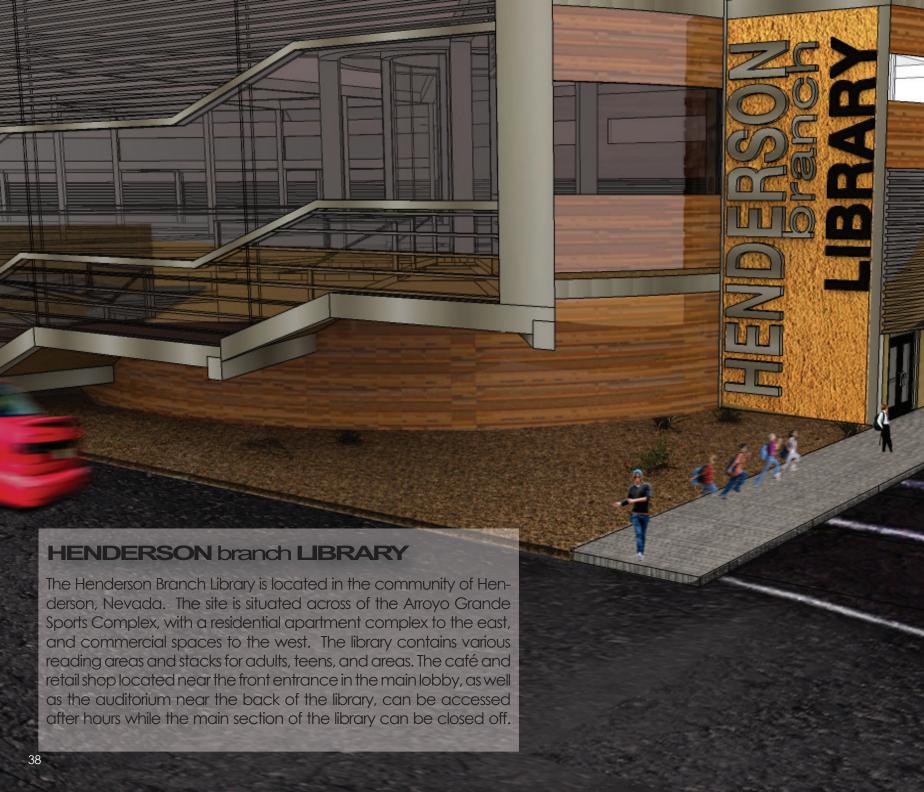
GROUNDlevel floorPLAN

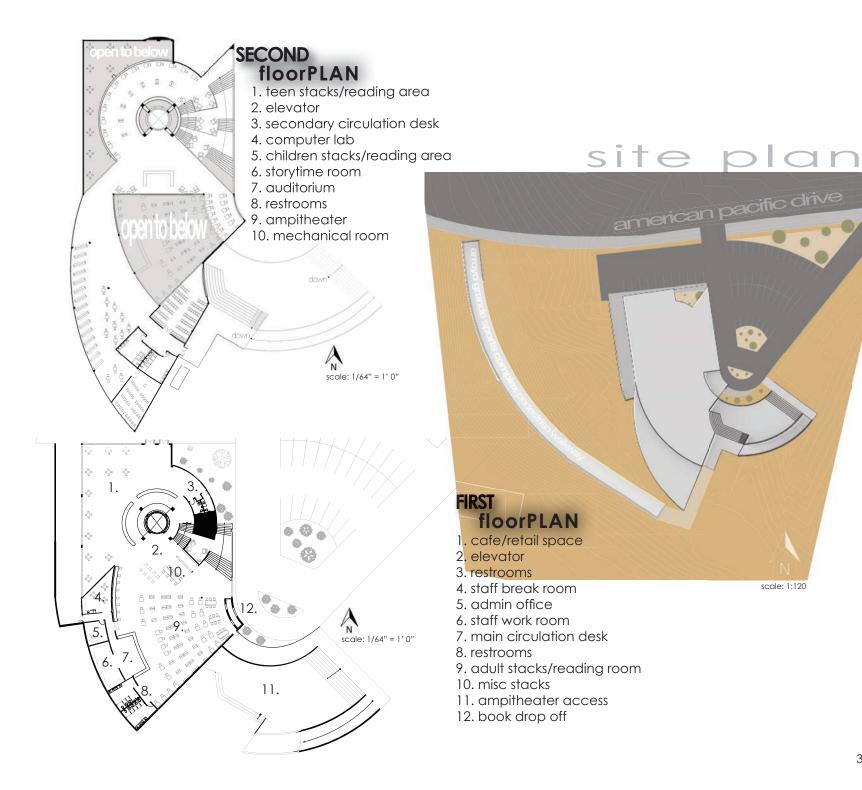




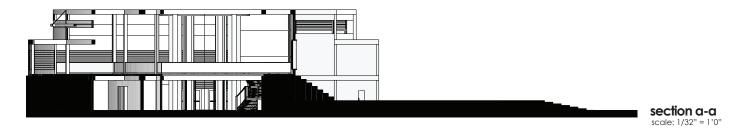








section cuts



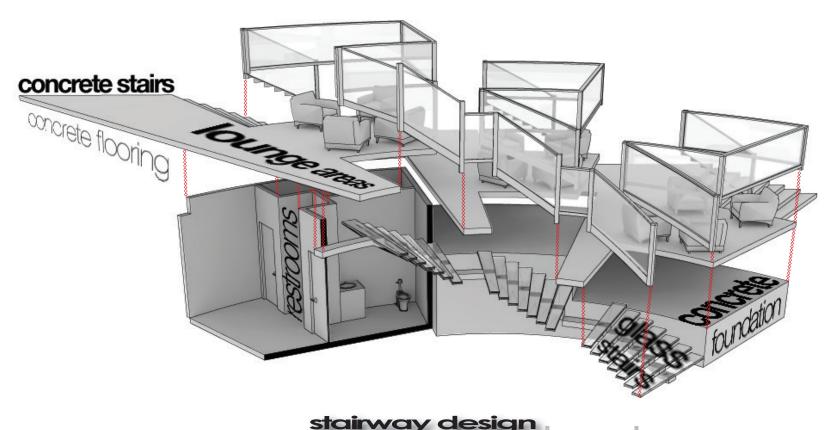


building elevations

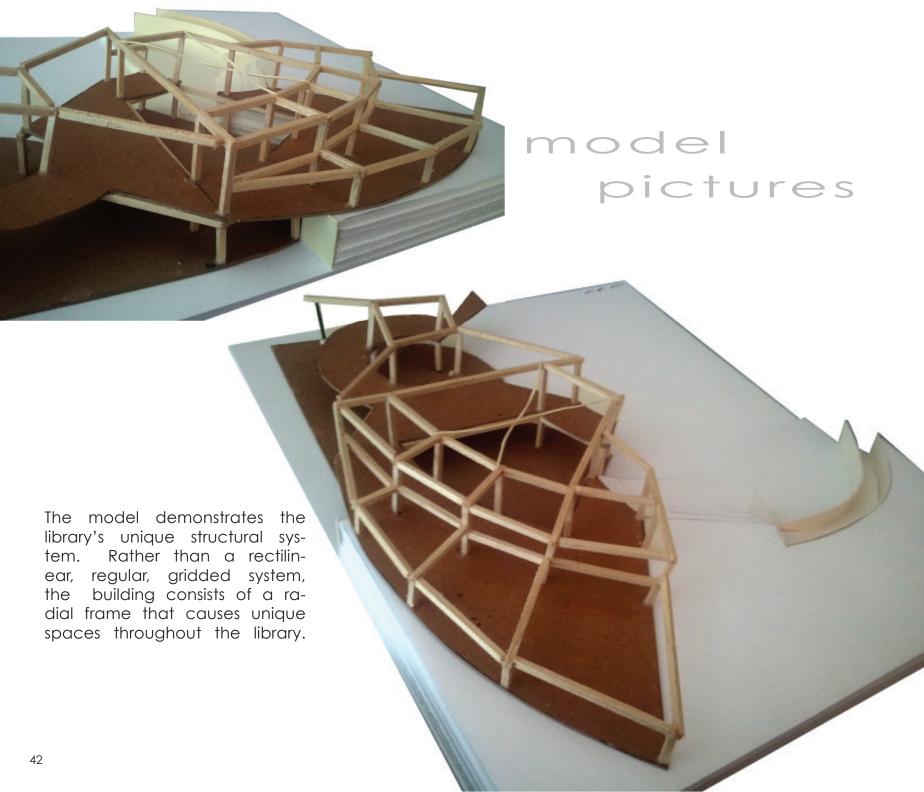




east elevation scale: 1/32" = 1'0"











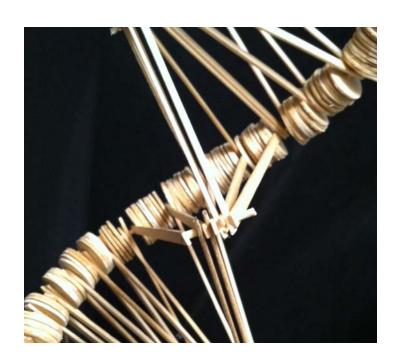






Kristin Difuntorum AAE 380

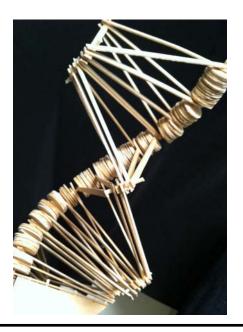
Professor Oakley







Two Assemblages One Joint





In the project **two assemblage's one joint**, we had to create an abstract sculpture out of entirely wood. It had to be two independent wood members connected to one another by a strong visual joint. So just by viewing it, it would be clear what the joint was and what its relationship was to the whole. During this process no glue or adhesives were to be used so I had to experiment different ways that wood can bond together without the use of glue.

Below are pictures of my process work, I was just becoming familiar with the wood and its properties. For my final I created a helix like shape that is skewed at an angle with the *joint being the piece running through the center*. This shape is visually pleasing because no matter what angle you view it from it will always look different. When viewed from the top one sees triangles in a radial relationship to a circle. While viewing from the side one can see how the angle of the base balances out the angle of the helix. As the structure proceeds to the top the wood members protruding out become less dense so that it looks as if the structure is slowly dissolving and would have completely disappeared if it were to continue.

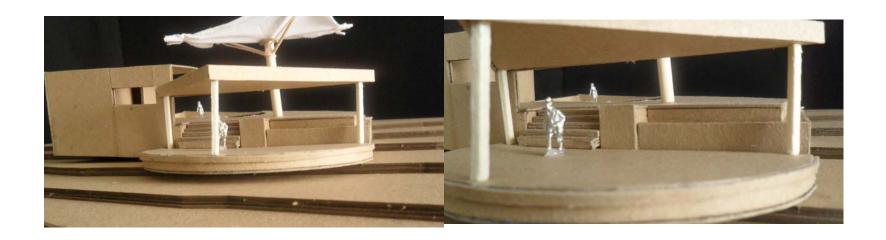








Pine Creek Red Rock Canyon



This project was a proposal for a pavilion at Pine Creek Trail at Red Rock Canyon National Park. The purpose was to create a place where visitors can relax before a hike or come to rest after a hike.

I took that idea and expanded it to become my concpet for the building to be an oasis. Which is defined as a place of relaxation in an area where it is hectic.

Figure 1 is a picture of an oasis in China which inspired the form of my building. I took the crescent like shape and used it as the base of my viewing platform. In my building, I wanted an oasis because I wanted my pavilion to be exactly that. Where after a long exhausting hike, hikers can see my building in the distance and feel a sense of relief. Where they can sit down relax and can get refreshed. I also put the vibrant colors of an oasis onto my building so that they feel like it's a different place aside from the desert.







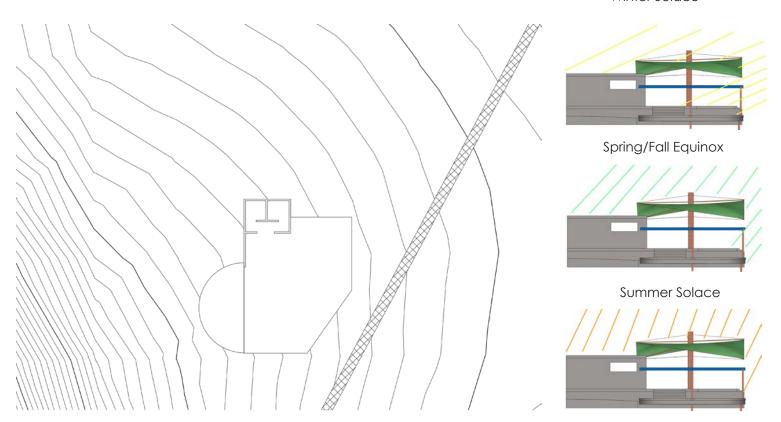
Site Views

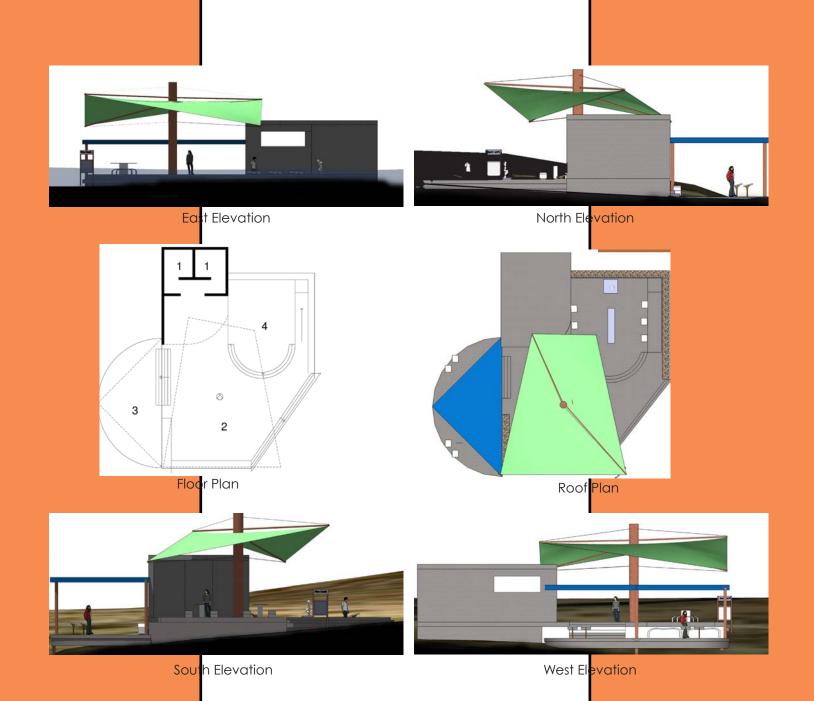




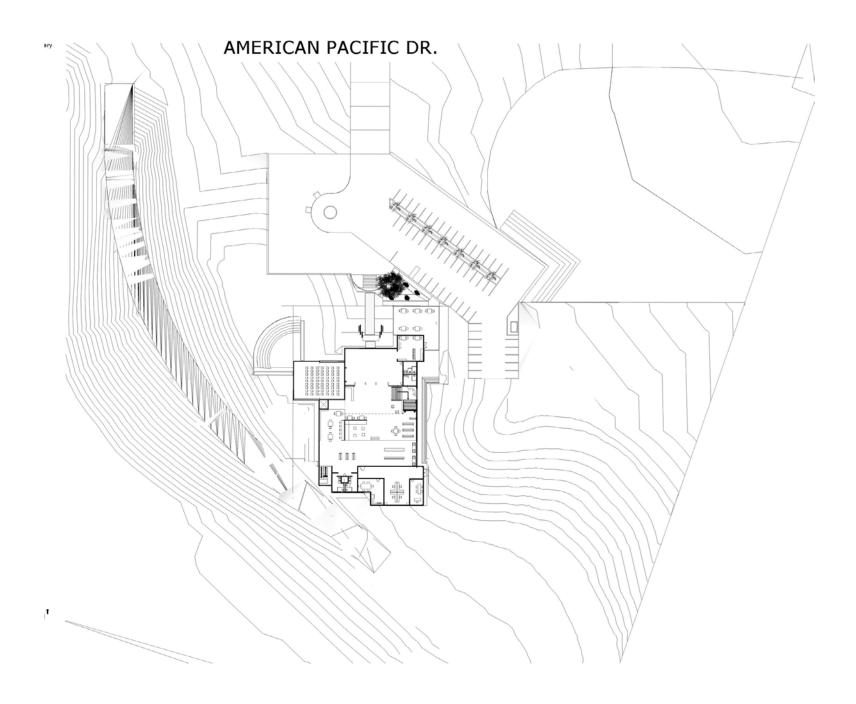


Winter Solace









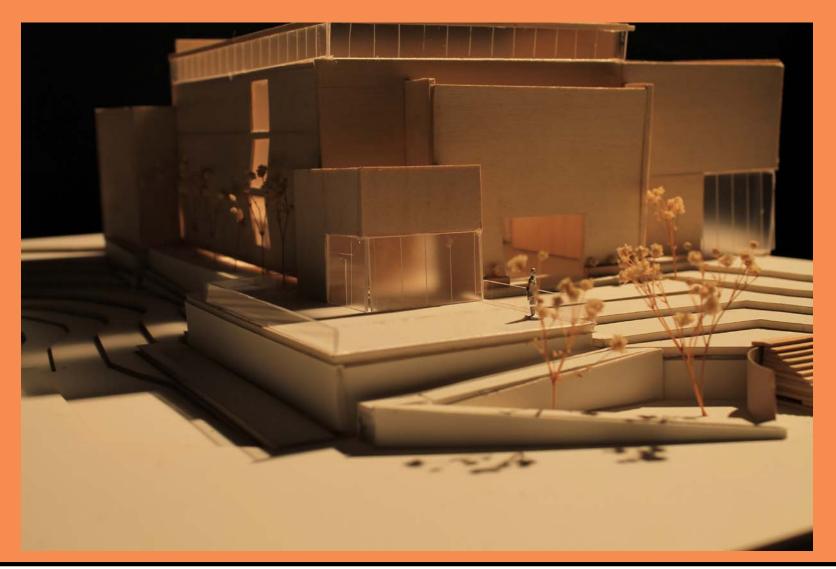








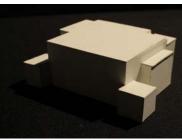


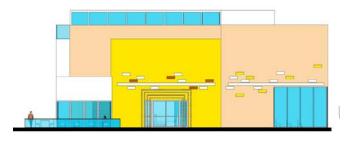






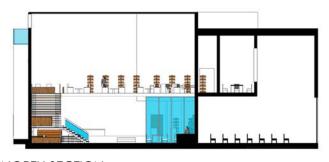




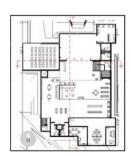


WEST ELEVATION

NORTH ELEVATION

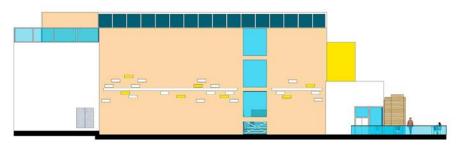


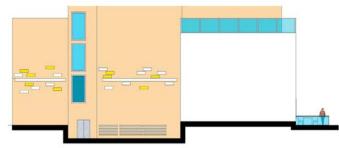
NORTH SECTION



WEST SECTION



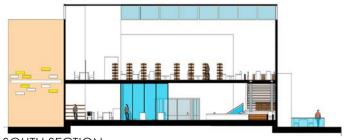




EAST ELEVATION

SOUTH ELEVATION

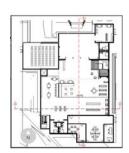




EAST SECTION

SOUTH SECTION









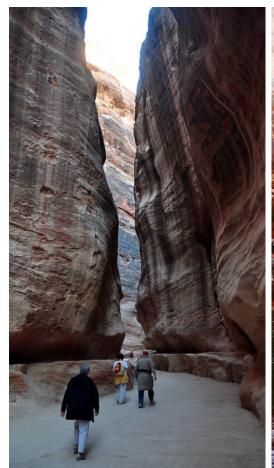




working within the restrictions of untreated basswood, the focal point of the project was highlighted through the joining of the material without the use of foreign objects to keep the pieces together. the design intention was to create a series of angled pieces in a random yet regular pattern to create a visual interruption between the masses and voids of the structure. through simple cuts and slip joints, the fence-like structure and second skin create a variety of intriguing interactions dependant on how the observer shifts and rotates the object.

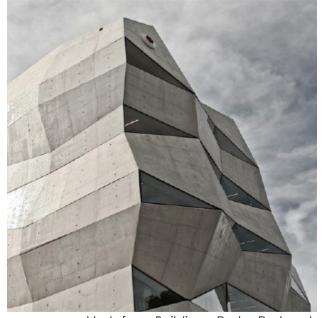
two assemblages one joint

kristina fivecoat



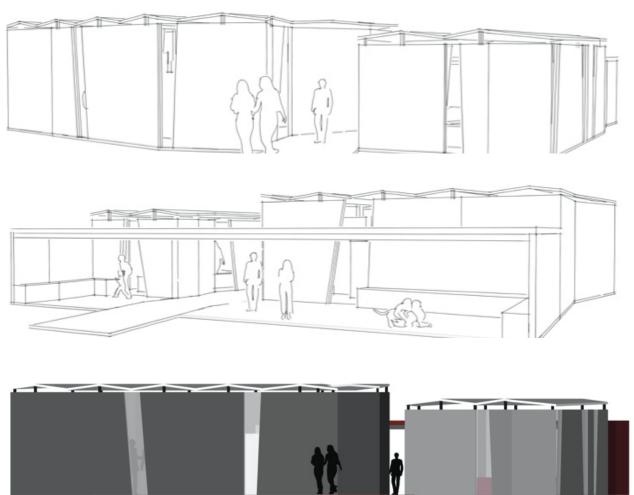






precedent canyon walls angled concrete

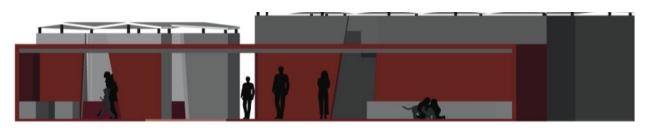
Vodafone Building - Porto, Portugal Barbosa & Guimarães Architects

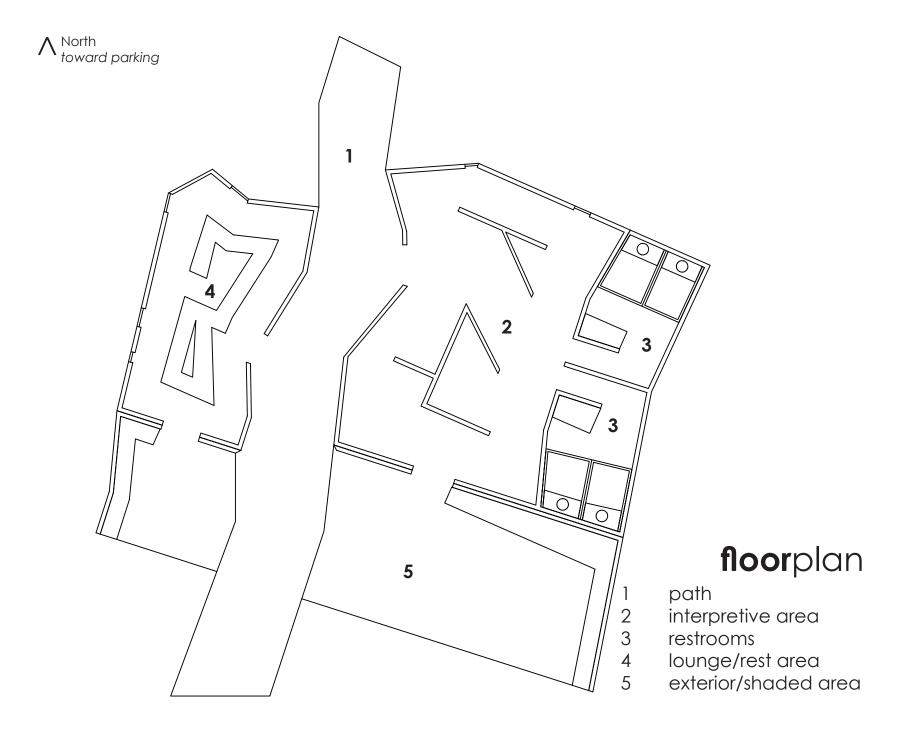


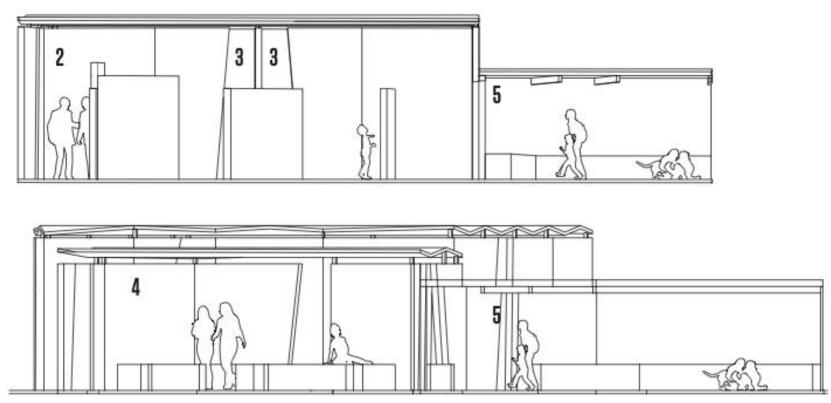
slanted concrete tall. walls give the visitor the experience of walking between natural paths and crevices created by the interaction of colossal canyon walls. an extruted roof and angled cut entry openings allow sunlight to permeate different interior spaces at different times of the year by through direct and indirect lighting. both spaces then open the visitor up to a wide shaded pavillion which looks directly down the pine creek trail toward the mountain range they came to hike.

northelevation

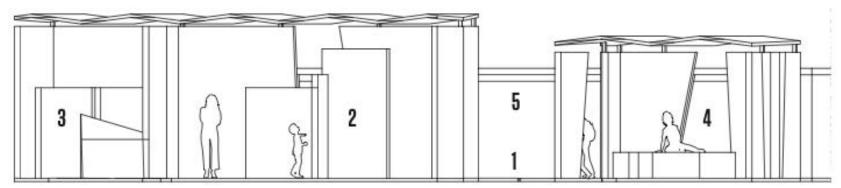
southelevation







north-southsections

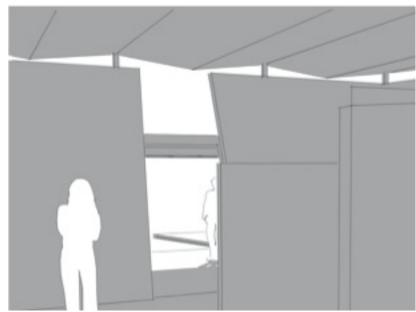


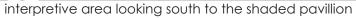
east-westsection

interiorperspectives

the exterior pavillion joins the interpretive and rest areas under vast shaded center that provides shelter from the heat brought by the sun during the warmer months, yet welcomes it's rays during the cooler months.



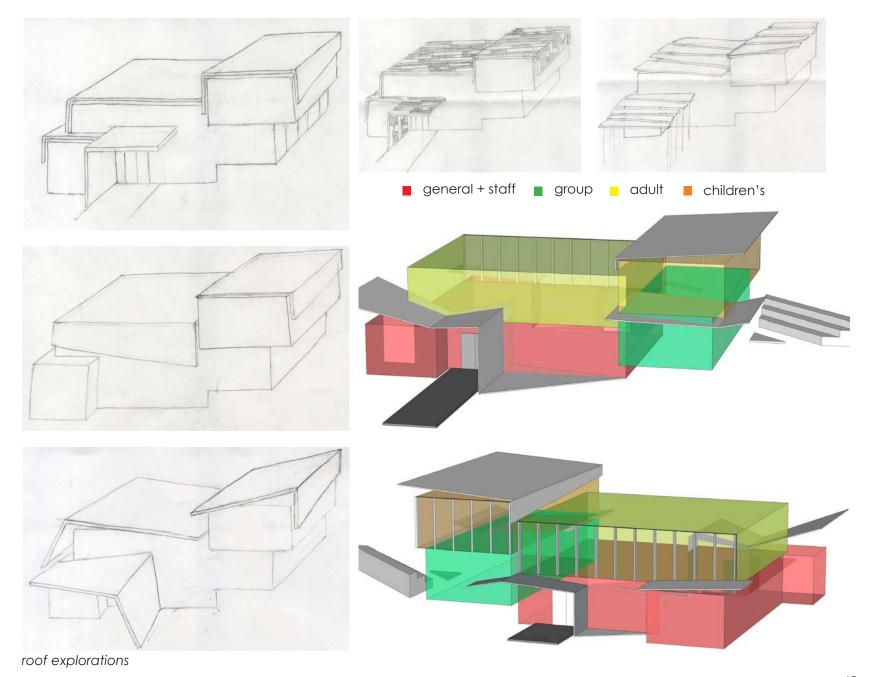


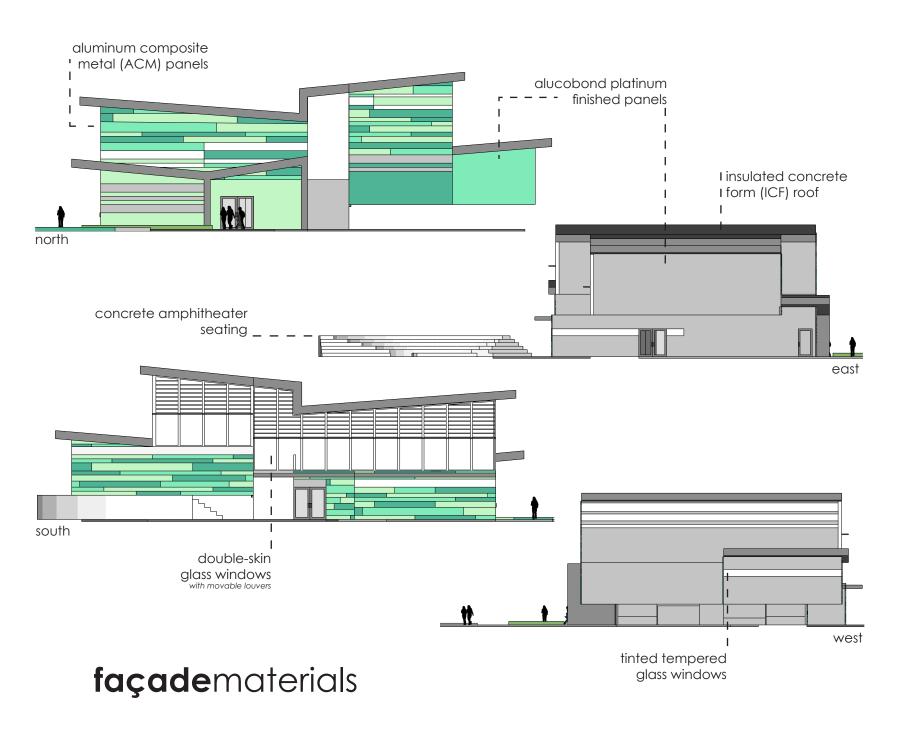


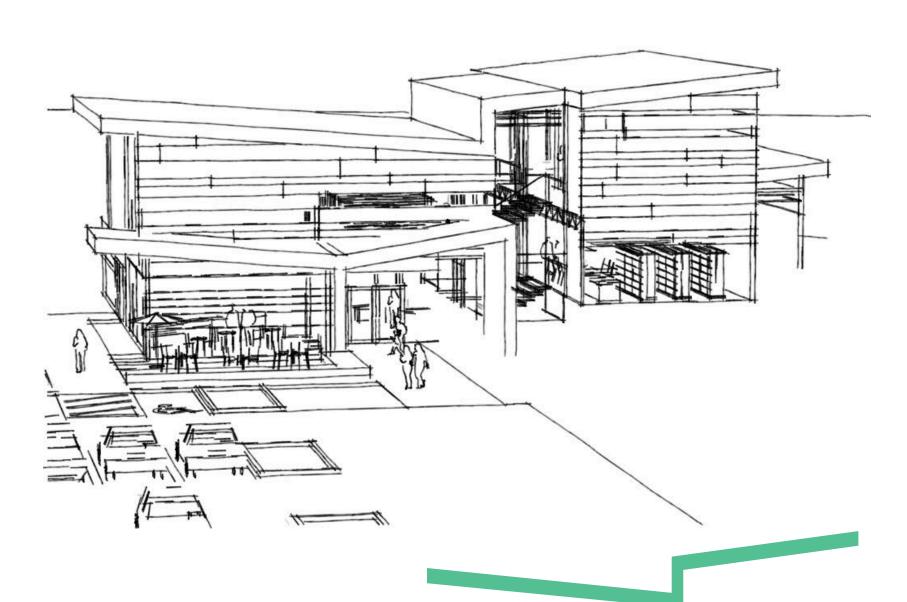


lounge area looking south to the shaded pavillion

libraryprocess work







henderson branch public library

las vegas-clark county library district





upon first visit to the project site in henderson, the decision was made to work with the uneven topography rather than take the easy route and flattening the site. by creating a split-level library, general spaces are separated for distinctive programatic purposes, but then brought back together by means of a powerful central system of circulation.

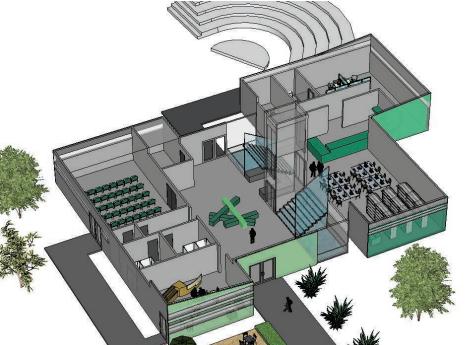






secondfloor

adult stacks study room restrooms storage kids stacks storytime room teen stacks study room storage



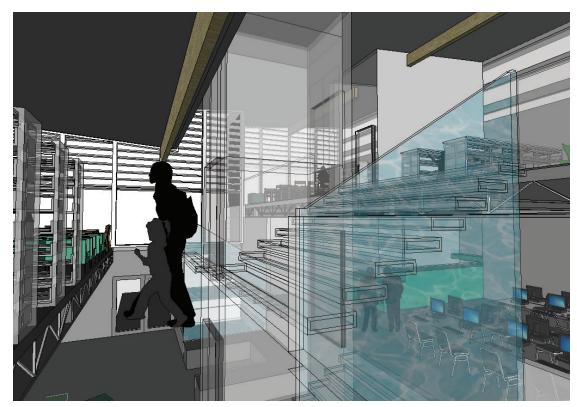
firstfloor

parking cafe outdoor seating flex space restrooms storage auditorium new books periodicals computers circulation desk staff areas

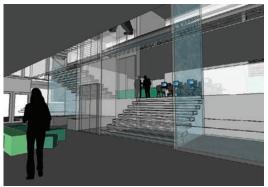
buildingsections



east-west











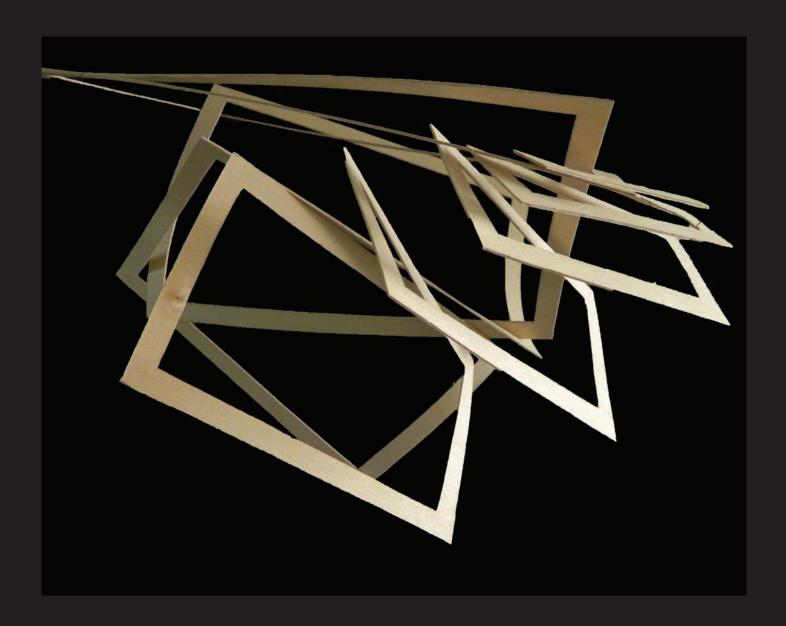
TWO ASSEMBLAGES + ONE JOINT

Design Challenge was to construct two assemblages and join the together. Each assemblege was to be considered as objects unto themselves and collectively, required no program or representational concept. The project was to be aesthetically pleasing and structurally sound. The design had to have balance, a joint, geometry, form, tension/tensile, compression, assembly, load, structure, repetition, fabrication, tectonics, and schedule.

The major design challage was that there was to be no concept. The design seemed contradictory in my mind. To come up with and idea that had to idea.

the design started with an idea of an abstract tree which latter i discarded when playing with the material i discovered this form (1). It latered evolved to a much bigger representation of it except with two similar forms.





RED ROCK CANYON NATIONAL CONSERVATION AREA **Pine Creek Canyon Trail Head**

1000 Scenic Loop Drive, Las Vegas, NV 89161

Pine Creek Trailhead Pavillion is ment to be the first of a series of pavillions to be located along the senic drive. The pavillion will serve multiple functions such as a trailhead, a local interpretive center, a refuge, and a scenic outlook.

The design consits of one simple concept. After visiting Red Rock the overrinding feature of the Canyon are its layers. More specifictly the boldness of the color and the simplisity it displays.

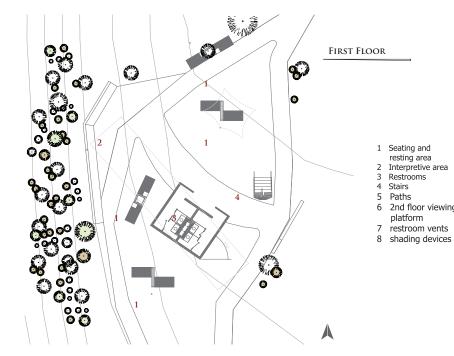
The bold layer in this design is represented by the cataliver viewing platform in the second floor. the restrooms and the structural support or base represents the mountain as

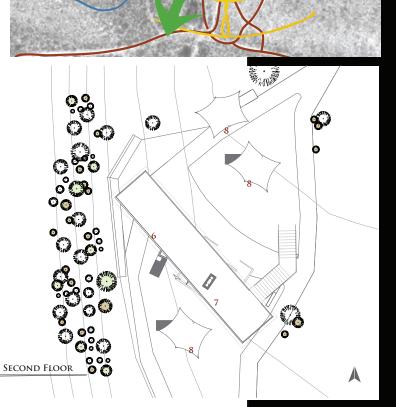
a whole. The materials consist of weathering steel and concrete in tones that recemble the natural pallet from on site.

On Site Observations

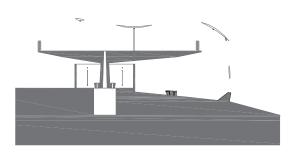
- · Majority of visibility located on the south and west side.
- · Visibility cleared on the remaining sides After a minimum of 10 feet elevation.
- Privaling winds arrive from west to south west.
- Hiking Trails Road/ parking Exsisting Restroom Positive Views **Negative Views** Sun





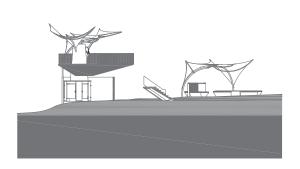




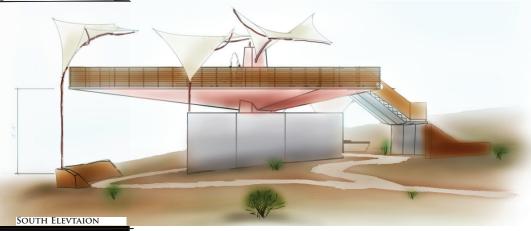


SECTION 1





SECTION 2





NORTH ELEVATION

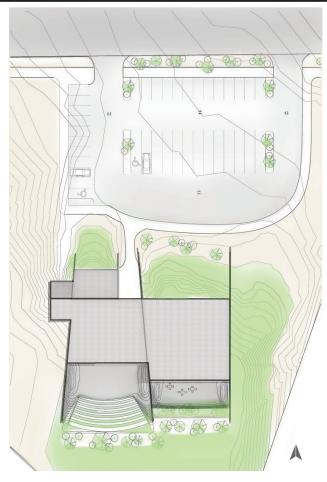
Abigail Garcia AAE 380 FALL 2012

HENDERSON BRANCH LIBRARY

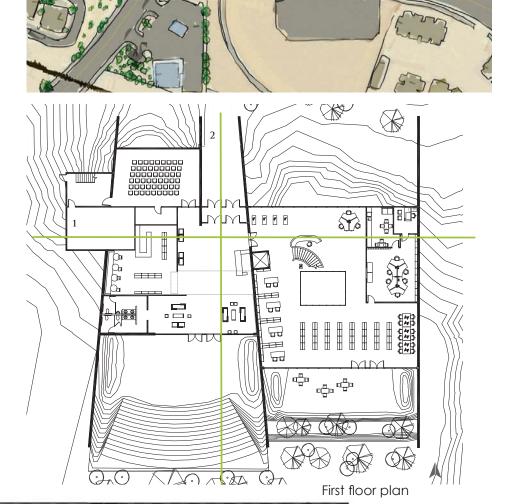
SITE LOCATION

ACROSS FROM THE ARROYO GRANDE SPORT COMPLEX

The site for the proposed Henderson Branch Library is a suburban area located just South of the Galleria Mall area. The location is adjacent to residential neighborhood and within walking distance from the Arroyo Grande Sport Complex located to the north. The major cross streets are Arroyo Grande Blvd. to the west and American Pacific Dr.

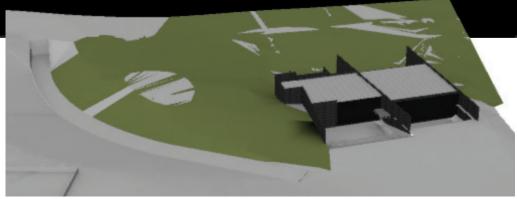


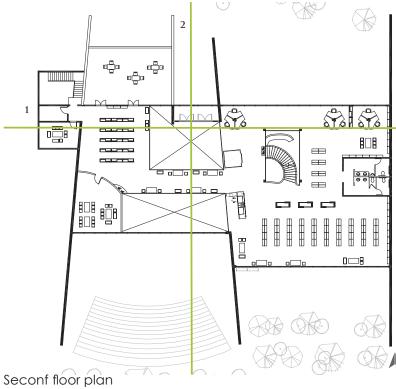
Site Plans

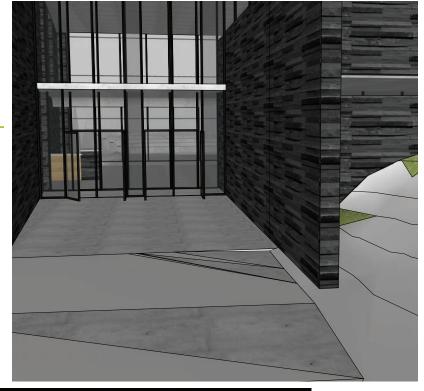


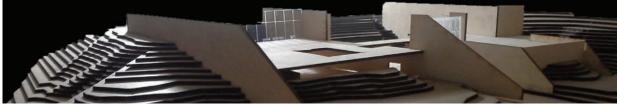












Iteration One Iteration Two









Exploration







TWO ASSEMBLAGES + ONE JOINT

You are to construct two assemblages. These assemblages are to be considered as objects unto themselves and collectively, requiring no program or representational content.



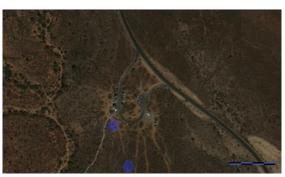
PINF CRFFK CANYON

History

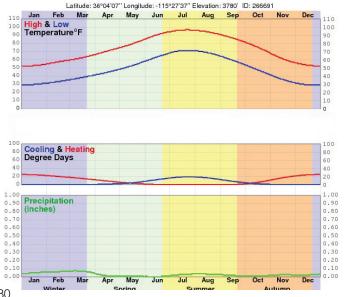
Pine Creek Canyon, located in the Red Rock Canyon Conservation area, has been a summer retreat and vital hunting grounds for Native Americans dating back thousands of years. The area has been forming for about 250 million years after it became exposed from a retreating sea. The multicolored, towering, Aztec Sandstone rock formations that dominate Pine Creek were formed from pre-historic sand dunes that have been weathered over millions of years. In recent history, homesteader Horace Wilson settled and named Pine Creek. Wilson built Pine Creek Ranch around 1925. After abandoning the property in 1933, squatters took up residence in the 1960's and burned the ranch to the ground. The foundation for the ranch is still in place today and can be seen at the end of Pine Creek Trail.







Temperature and Precipitation

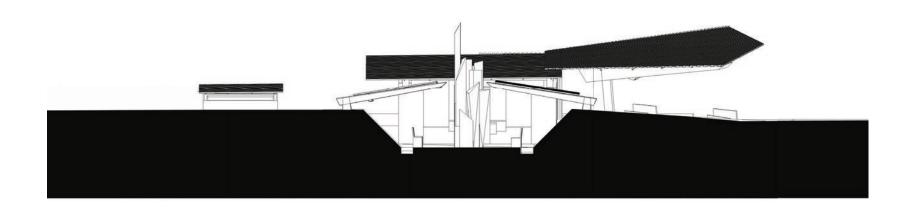


Topography

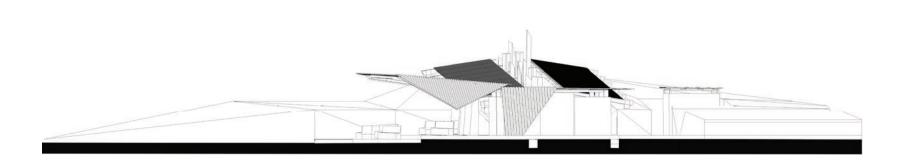


South Section View

PINE CREEK CANYON

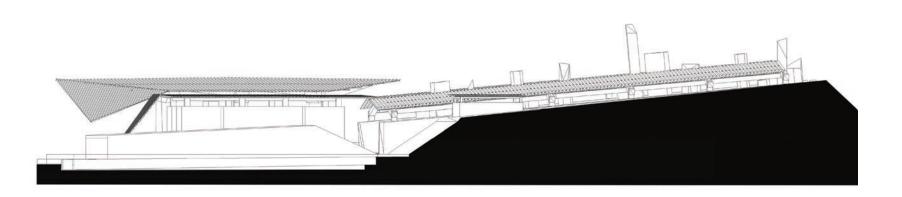


NORTH ELEVATION

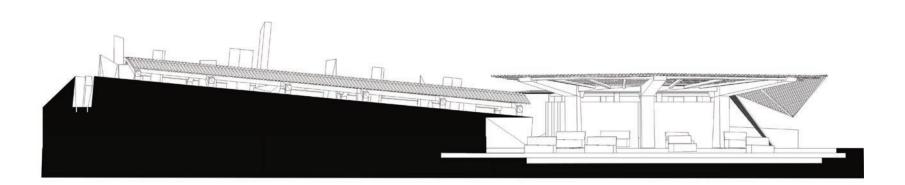


SOUTH ELEVATION

PINE CREEK CANYON



EAST ELEVATION



WEST ELEVATION

PINE CREEK CANYON

EXTERIOR PERSPECTIVE



INTERIOR PERSPECTIVE



CATTAIL BRANCH LIBRARY

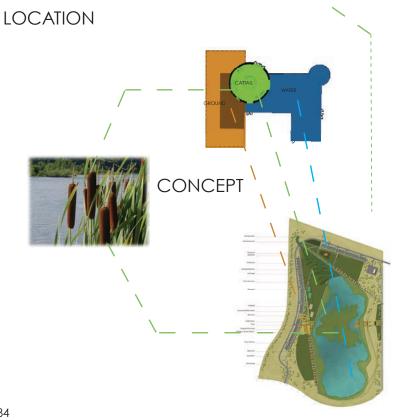








SITE

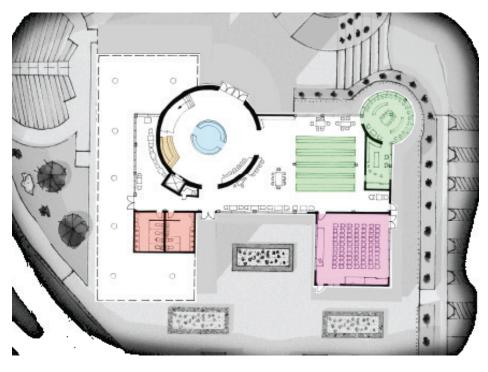


The Henderson Branch Library project is located just East of Arroyo Grande Ave. on American Pacific Drive. The Site is currently being used for adjacent parking for construction and overflow traffic. The topography is complicated due to the excavation of an access tunnel that runs through the West and South side of the site. Views are limited to the North and South with Apartments and a service station on the East and West sides of the site. Currently there is a wetland park (Cornerstone Park) that is being constructed just south of the site and it is the goal of the design to make a physical and metaphorical connection to this adjacent project.

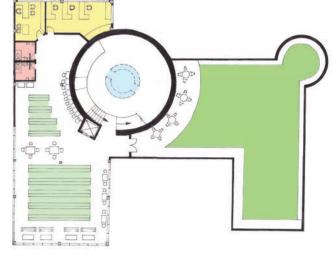
CATTAIL BRANCH LIBRARY



85



FLOOR PLANS



ADULT BOOKSTACKS	
LIBRARIAN'S OFFICE / WORK AREA	
CIRCULATION DESK	
GREEN ROOF	
CHILDRENS STACKS	
BATHROOMS	
STORYTIME	
CAFE	
MEETING ROOM	



EAST ELEVATION



WEST ELEVATION

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CATTAIL BRANCH LIBRARY



NORTH ELEVATION



SOUTH ELEVATION



EXTERIOR PERSPECTIVE





PROJECT I



IT'S NOT WHAT YOU LOOK AT THAT MATTERS, IT'S WHAT YOU SEE.

~ HENRY DAVID THOREAU



DESIGN CHALLENGE:

Construct two assemblages. These assemblages are to be considered as objects unto themselves and collectively, requiring no program or representational content. The joint should, in its construction, explain the relationship between the two assemblages.

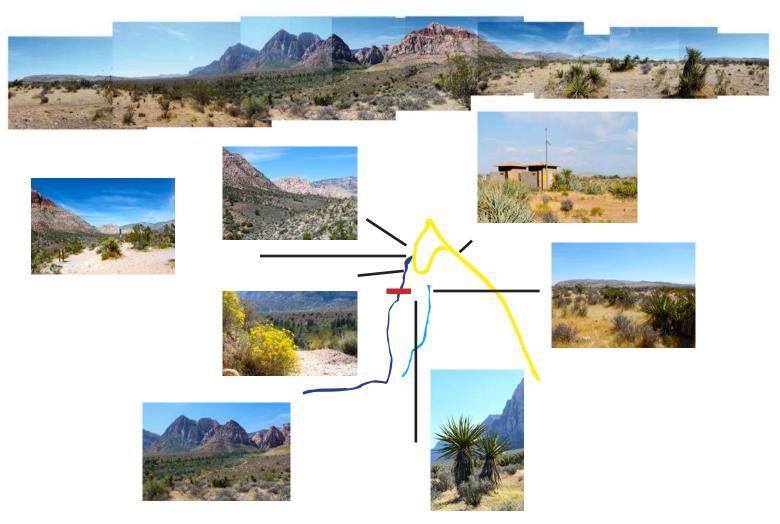




CONCEPT:

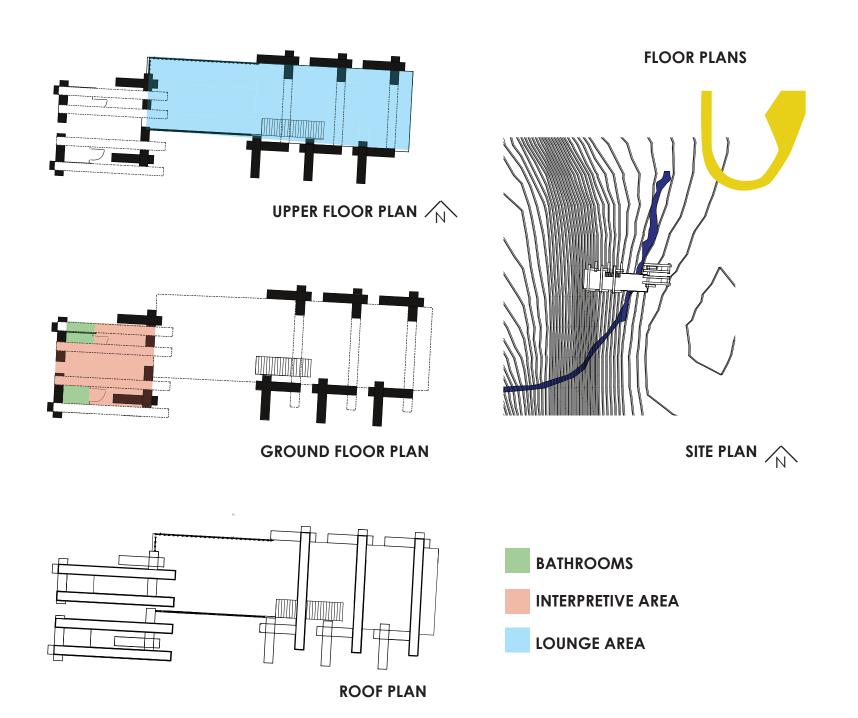
By utilizing bent and twisted wood the design challenges the viewer's perception or understanding of the nature of the material, and how objects come together. Objects can be physically joined together or their connection can be visual. In this case, the two assemblages speak the same language, and they are joined by the subtle variations in the curves and contours of the material, and the composition that is created when they come together.

PROJECT II

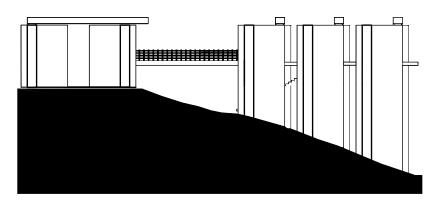


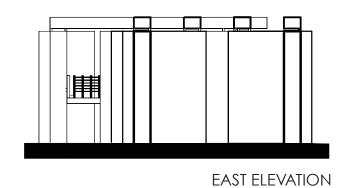
DESIGN CHALLENGE:

The Bureau of Land Management has enlisted your services to design the first of a series of pavilions to be located along the scenic drive a the numerous trail heads and scenic outlooks. The first pavilion is to be located at the Pine Creek Trailhead.

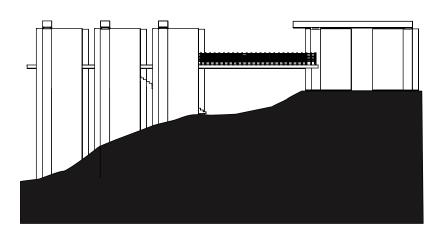


PROJECT II

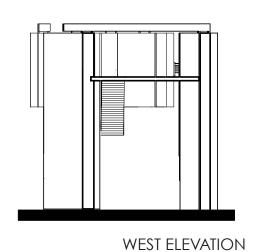




NORTH ELEVATION



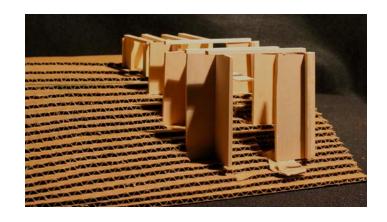
SOUTH ELEVATION

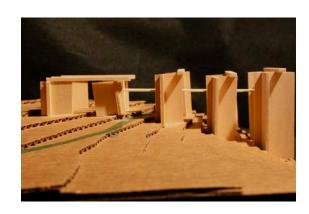


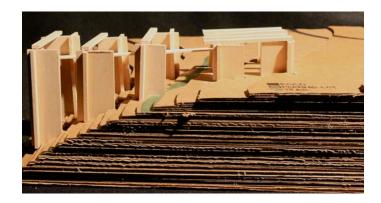
96

MODEL PICTURES







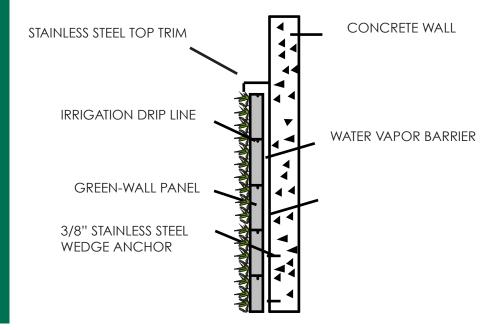




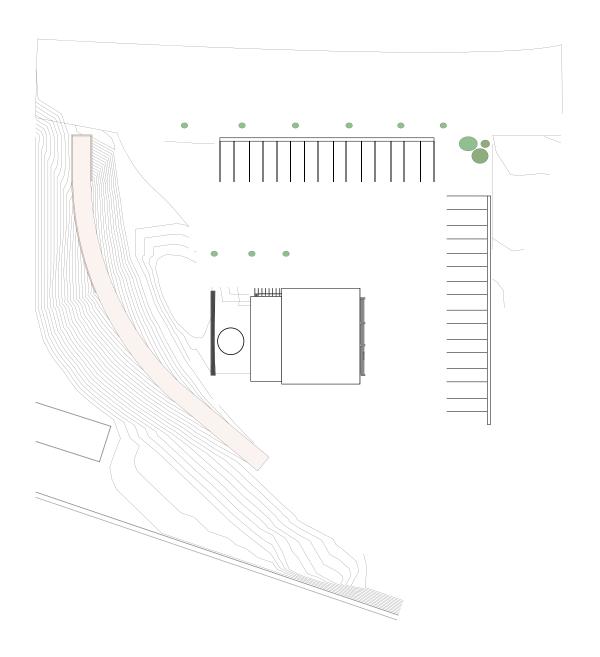
PROJECT III

Living walls break down vocs, through the process of biofiltration and can be integrated directly into the building's air handling system, creating cleaner air flow. An active living wall integrates the beneficial biological processes responsible for cleaning outdoor air thereby offering a sustainable, energy efficient means of controlling indoor contaminants.

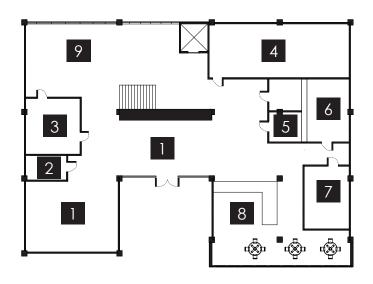
~ Dr. Alan darlington

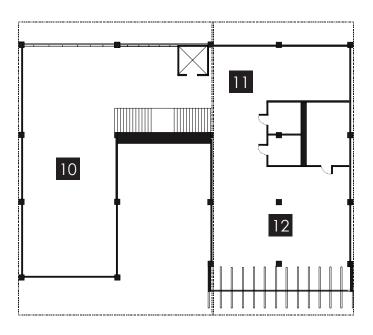


SITE PLAN



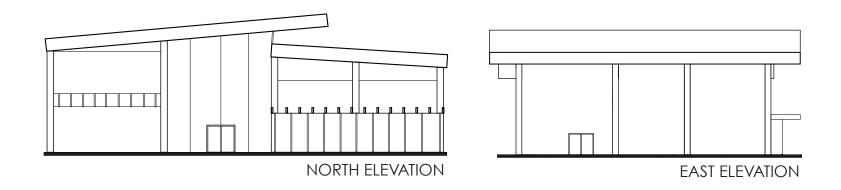
FLOOR PLANS

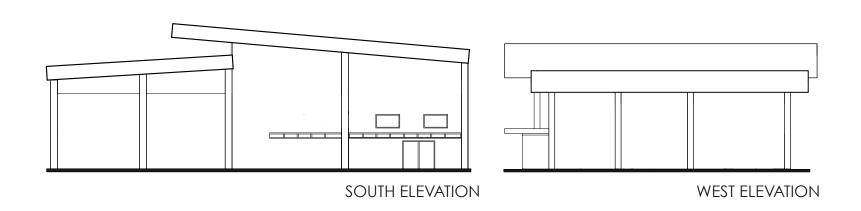




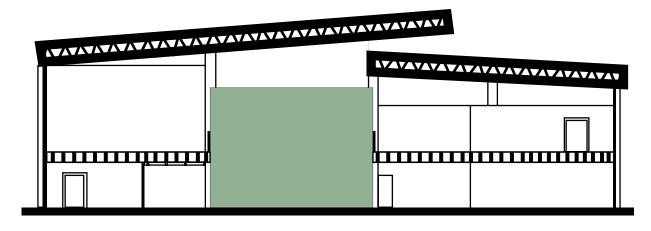
- MAIN ENTRANCE/
 SELF SERVICE CIRCULATION DESK
- 2 LIBRARIAN'S OFFICE
- 3 EMPLOYEE AREA
- 4 AUDITORIUM
- 5 RESTROOM
- 6 JANITOR CLOSET
- 7 MECHANICAL ROOM
- 8 CAFE
- 9 PUBLIC COMPUTERS
- 10 YOUNG PEOPLE'S LIBRARY
- 11 QUIET STUDY AREA
- 12 ADULT STACKS/READING ROOM

ELEVATIONS SECTIONS

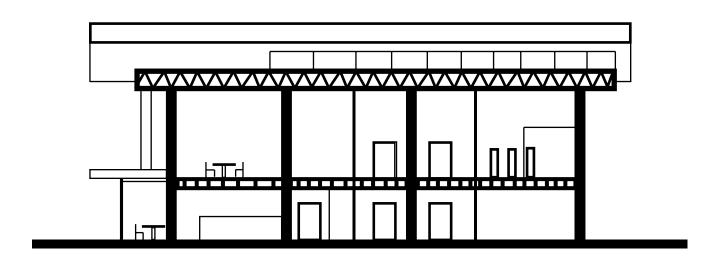




SECTIONS



SECTION A



SECTION B

MODEL PICTURES





examples of wood joints...



The mortise and tenon joint has been used for thousands of years by woodworkers around the world to join pieces of wood, mainly when the adjoining pieces connect at an angle of 90°.

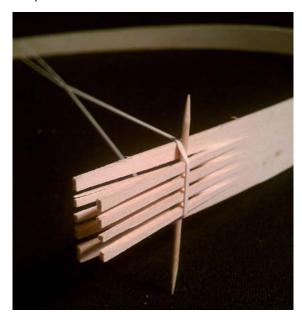


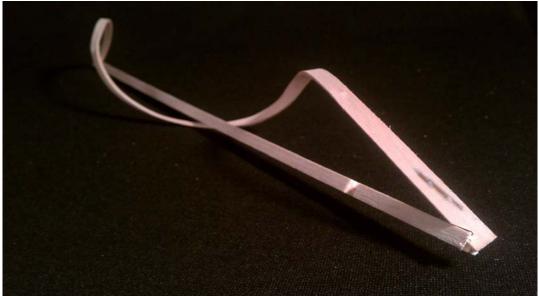
This is an example of Japanese Box Joint. The Japanese traditions in particular include hundreds of types of joints, many of which do not use glue or nails.

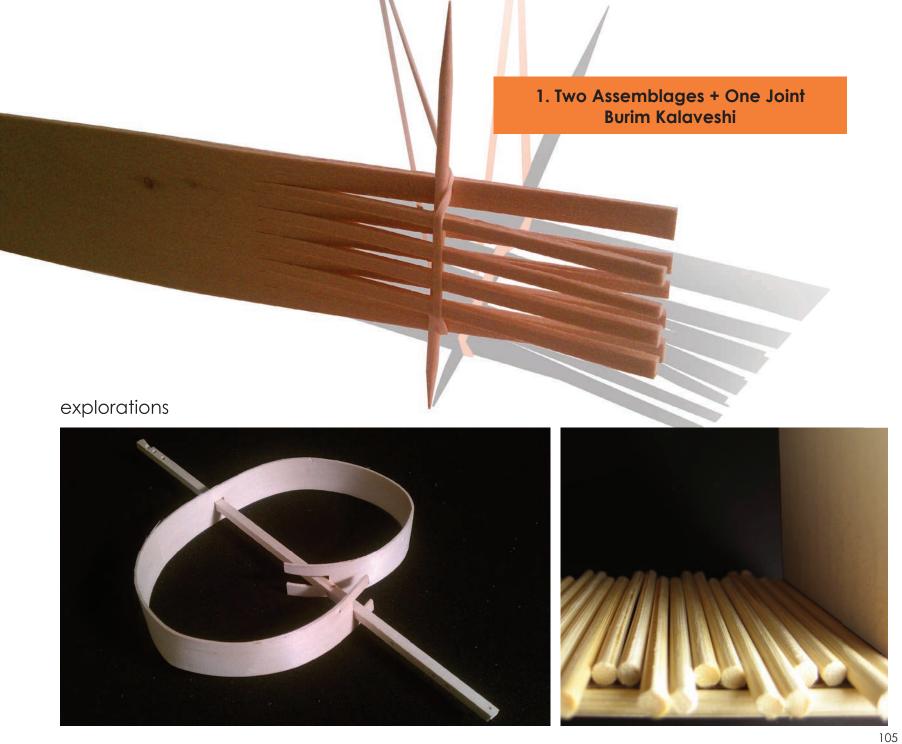


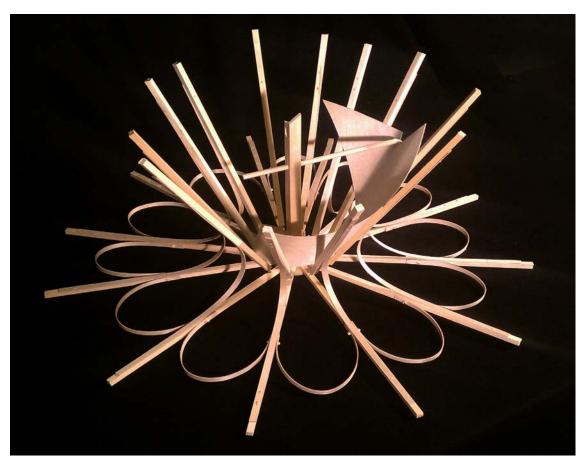
Log work constuction uses hidden slits to rest each log on top of each other making a cabin wall studry.

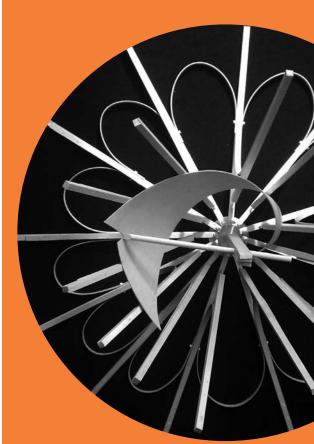
explorations

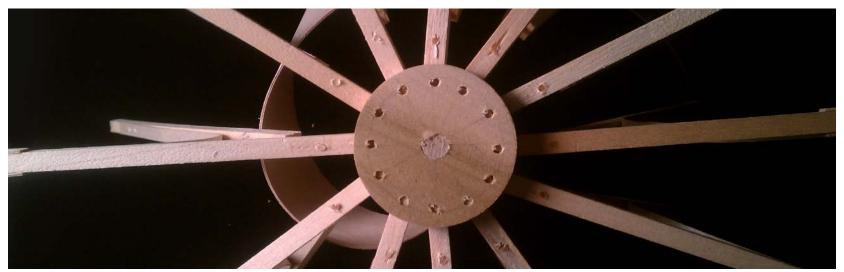


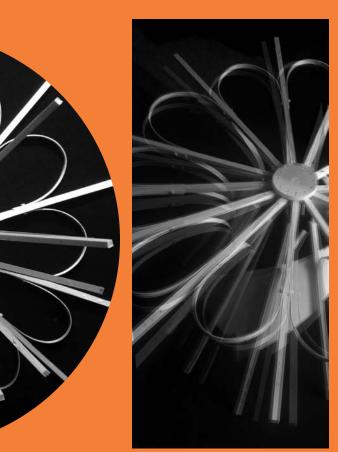
















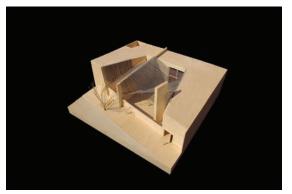
precedent...



New Amsterdam Plein and Pavilion, Battery Park, NY. NU Architects



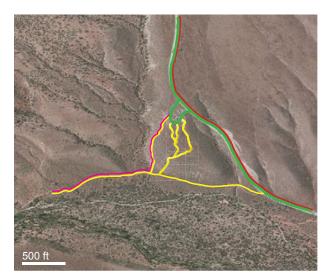
Lincoln Park Pavilion. Studio Gang Architects



Eco Pavilion, Mexico City, Mexico. MMX

PINE CREEK SITE AT RED ROCK CONSERVATIONAL AREA

EXISTING



Drivign roads
Street bike trail
Trails
Biking Trails



Picture of the site



Site analysis sketch

PROPOSED

Parking is moved and hidden behind a hill preventing obstruction of natural views.

Pronounced building makes a statement and becomes visable from multiple angles.

Building acts as a connection of three unclear existing trails and a creates gafeway to the main trail.



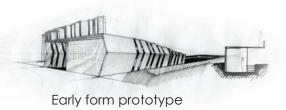


2. Pine Creek Trailhead Pavilion Burim Kalaveshi









Visit center, view and trail relationship

Form explorations

Study models of form development and site oriantation











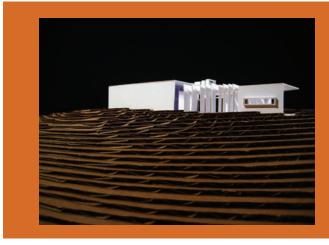
- 1. Shading structure model
- 2. Study model of pavilion

PERSPECTIVE VIEWS

HEAVY WALLS HIGHLIGH THE RECTANGULAR SHAPE CREATING
AN ENTRY IN ONE SIDE AND, A BEGINNING OF PINE CREEK TRAIL
ON THE OTHER





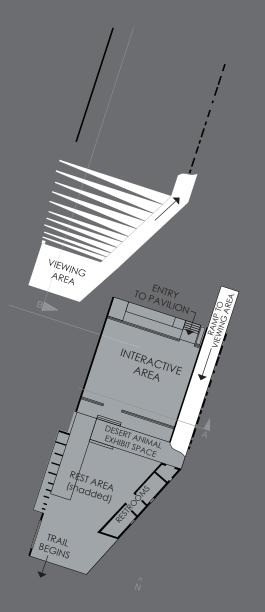


PHYSICAL MODEL - VIEW FROM TRAIL



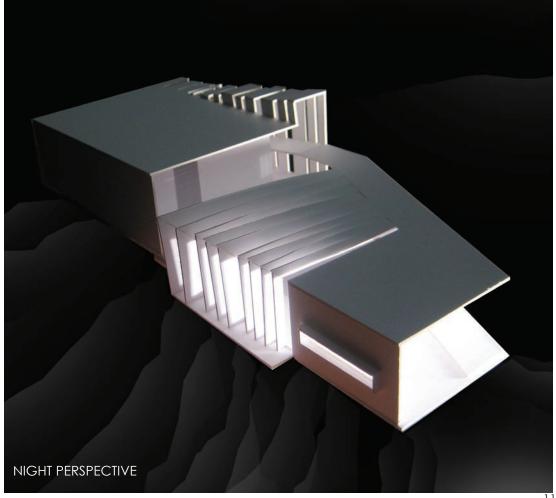
PLANS

PAVILION AREAS ARE DESIGNED TO BE REVIELED IN PORTIONS, AS VISITORS WALK THROUGH THEY HAVE EXPERIENCED DIFFERENT SPACES AND INTERACTED WITH NATURE IN DIFFERENT WAYS.

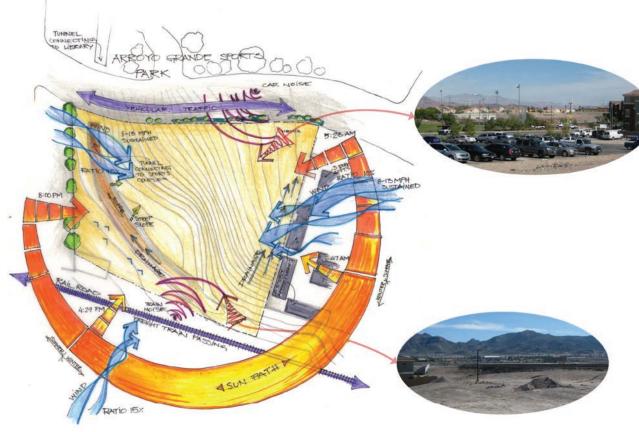




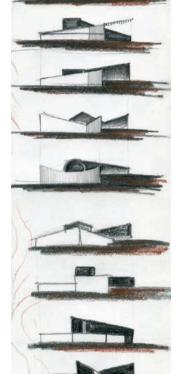




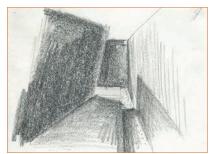
SITE ANALYSIS

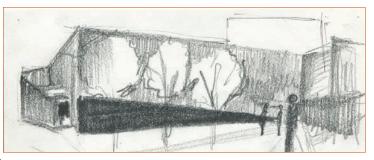


FORM EXPLORATION



PRECENDENT sketches at the site





Richard + Bauer: Arabian Library

PARTI

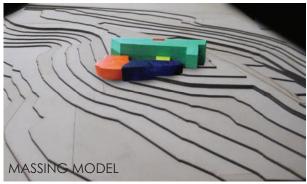


CIRCULATION

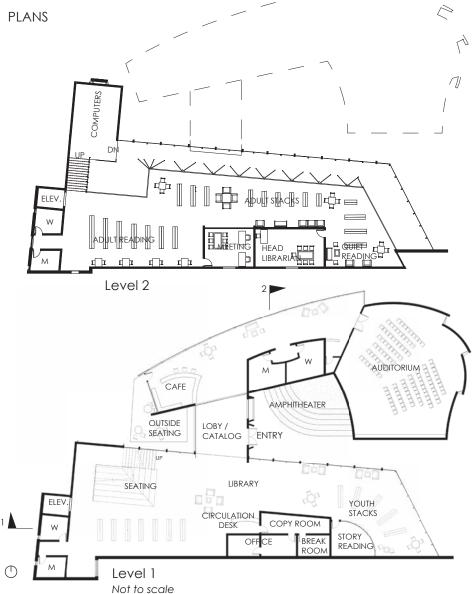


PROGRAM

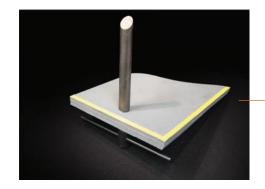




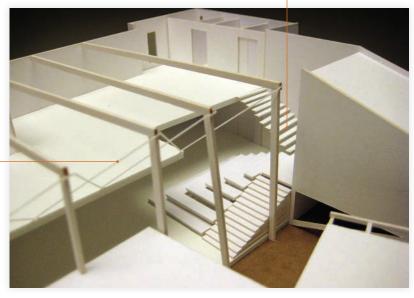
3. Henderson Branch Library Burim Kalaveshi







DETAILED MODEL OF SUSPENDED STAIR

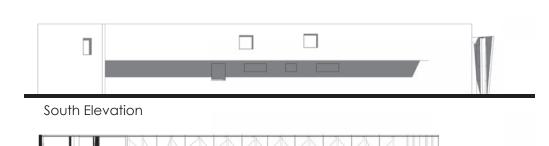


Structure is clebrated throughout library with rods suspending the 2nd floor

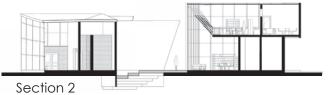
Iron rods complete this run all the way down to the stair landing carrying half of the stairs as shown in the model

WEST ELEVATION / ENTRANCE





East Elevation



Section 1 Not to scale





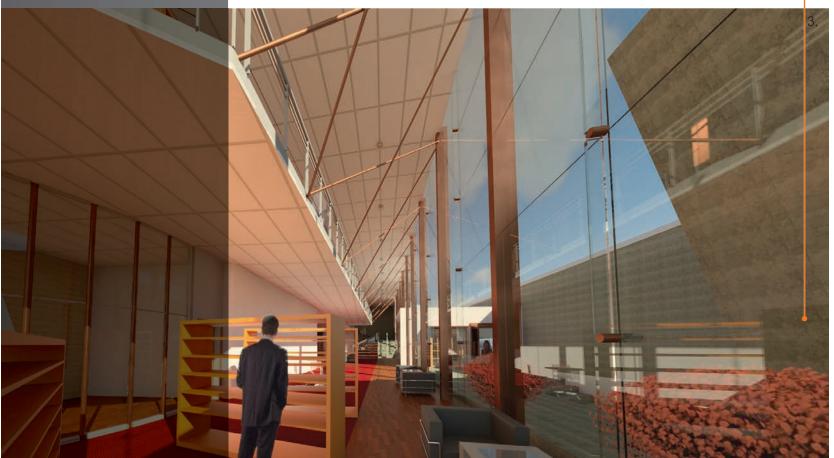


FINAL STUDY MODEL





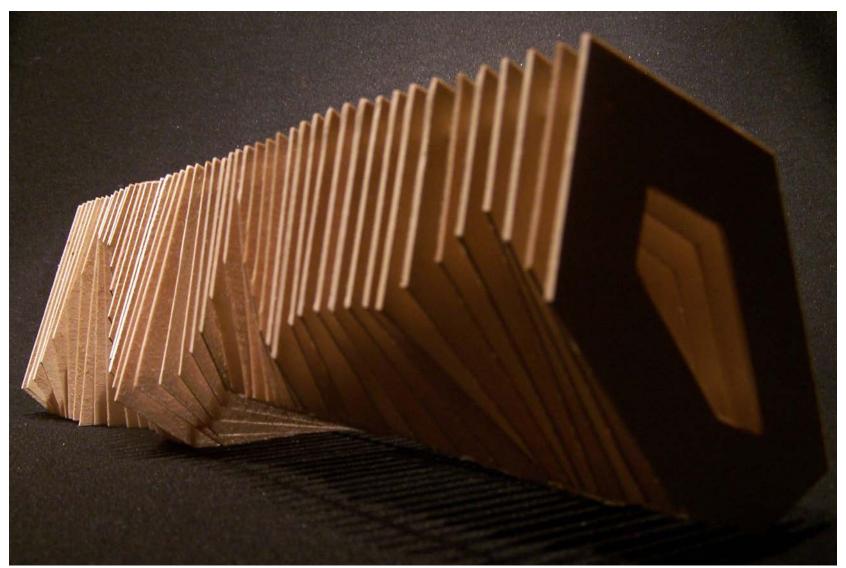




- APPROACHING ENTRANCE, COLUMNS ENCASED IN
 COPPER AND SLANTED WALLS OF THE AUDITORIUM MIMIC
 CANYON WALLS REPRESENTING NATURAL SURROUNDINGS
- 2. ENTRANCE WALL IS COVERED IN A UNIQUE PATTERNS SHOWING LIGHT AND SHADOWS
- 3. LIBRARY
 VIEW OF THE GLAZED PATH FROM CAFÉ TO AUDITORIUM
- 4. AUDITORIUM
- 5. STAIR AND READING AREA



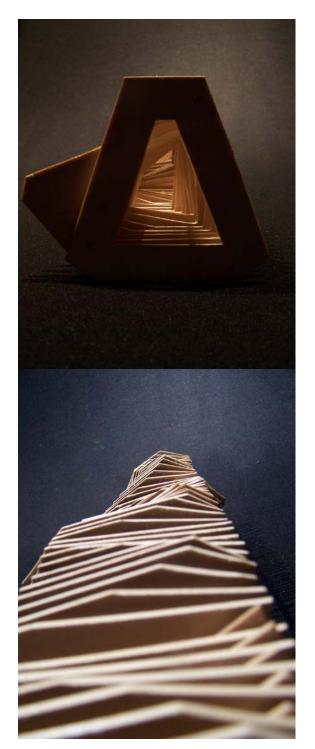






two assemblages + one joint

this design required that there be two different units that share one single joint or joint type. for this design i played with the idea of multiple geometric forms that when arrayed along a line, created an undulating, sinuous and organic movement along its length. in this case two of these shapes, of different sizes, are joined along a singular axis and blend together to create a sungular form.



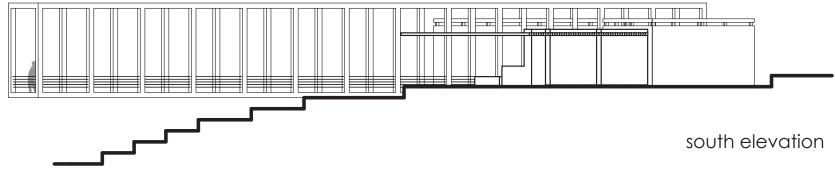


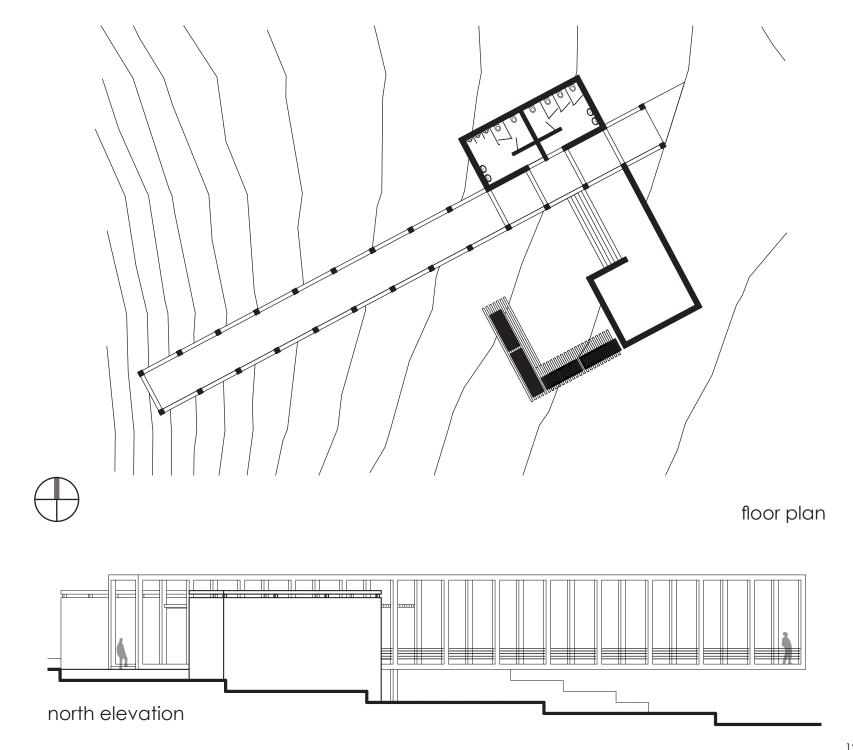
red rock pavilion

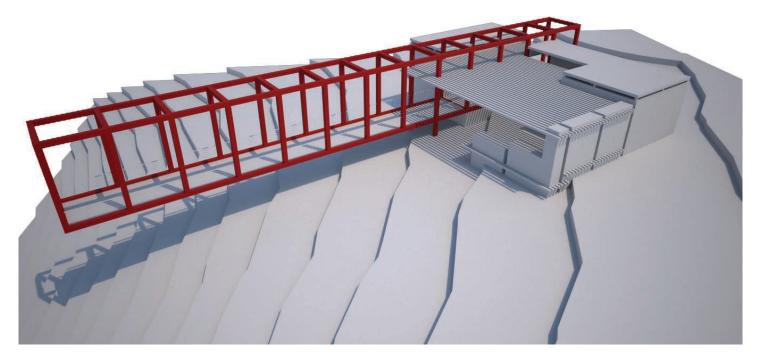
for this project the primary design concept was to attract the user directly out to the end of a long spanning frame where they can get a view from a place that one could normally never go, seventy feet out and twenty feet above the edge of a very steep slope. Through the use of a massive Virendeel frame this project is able to both handle a huge cantilever and also create a space that is not blocked by the typical diagonal member that would otherwise be found in a normal truss system.

attached to the frame is a restroom, an interactive space and an exterior shaded rest area where a guest could sit down in a well shaded area no matter what the time of day is.

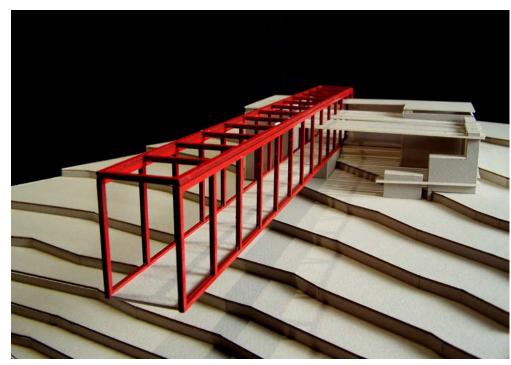


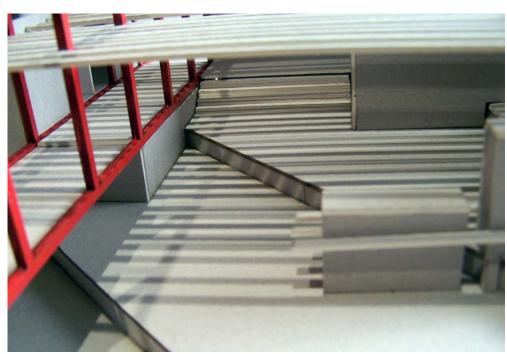




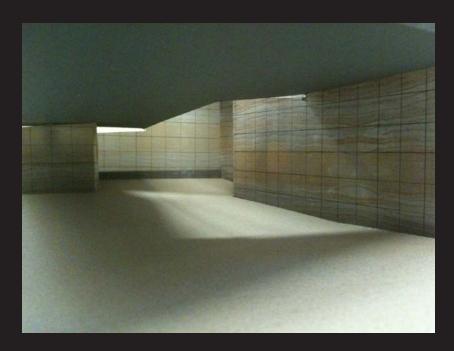


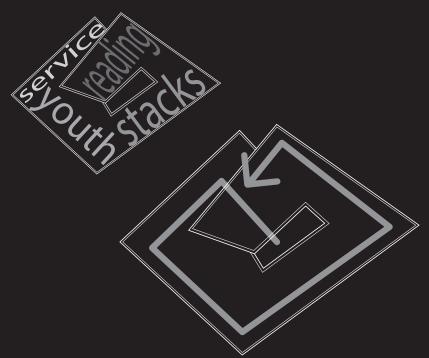












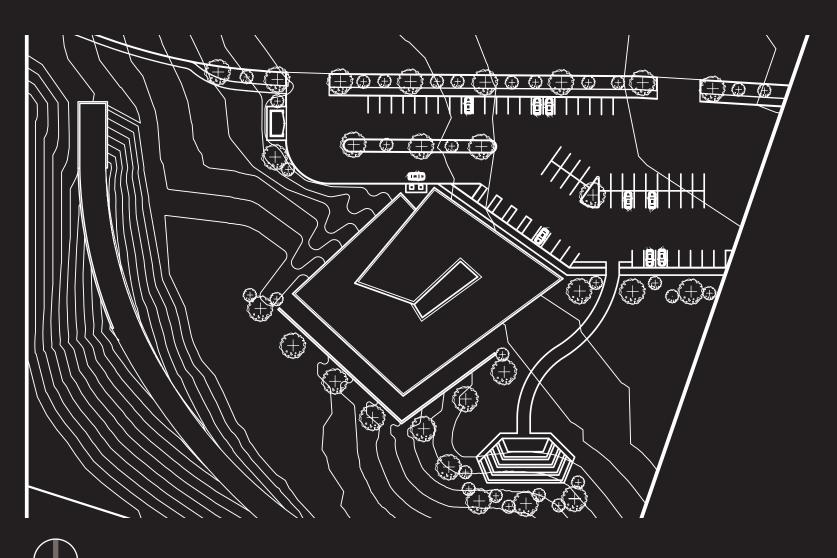
for this project the studio was given the task of creating a library in henderson. this library had to be designed as a 12,000 square foot branch library that included 1,800 square feet of adult and youth stacks as well as a cafe, auditorium, public computer area, childrens story-time room, and amphitheater.

the proposed solution to this problem was to create a ramp system that defined the primary circulation for the library from which all programmaic spaces branched. from the exterior the user approaches the library from beneath the second floor of the structure, which though fully shaded, has a highlighted entry space from an occulus formed by the building itself, a detail of which is shown to the left.

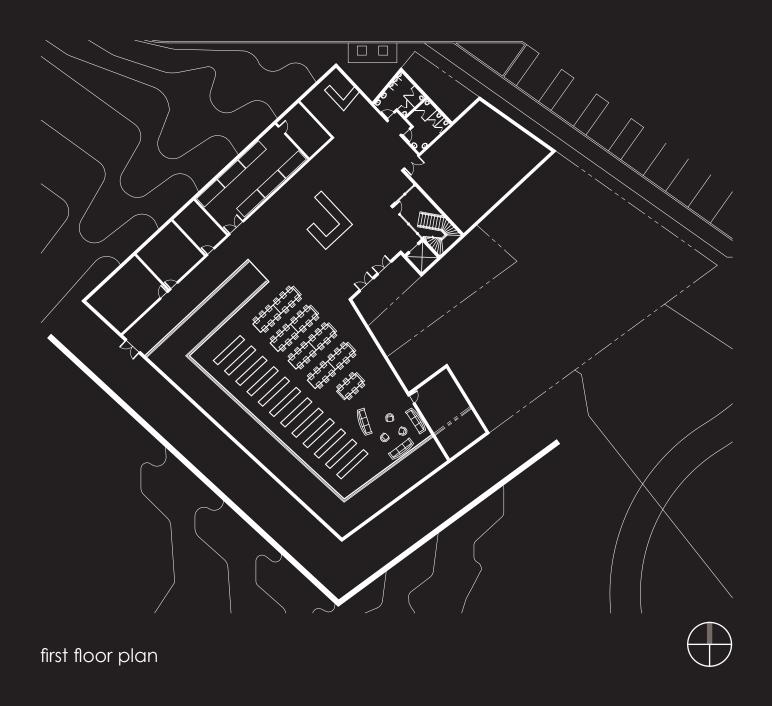
upon entry to the library the user is met by the circulation and help desk, and to the right is the cafe and auditorium, and to the left the public computers, youth space, and ramp system. upon traveling up the ramp the user is brought to the adult area of the library which contains secondary catalog

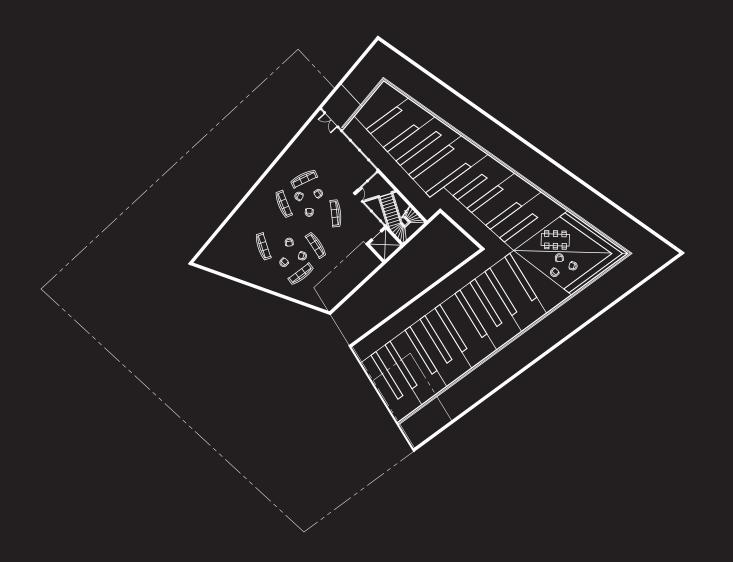
computers and an extensive reading area.

the adult areas and the youth areas are separated by more than just a ramp. in order to keep the noise down between the two primary spaceds, there is not only a level change, but a glass enclosure around the adult reading area to block any noise that might rise up from the youth areas below.



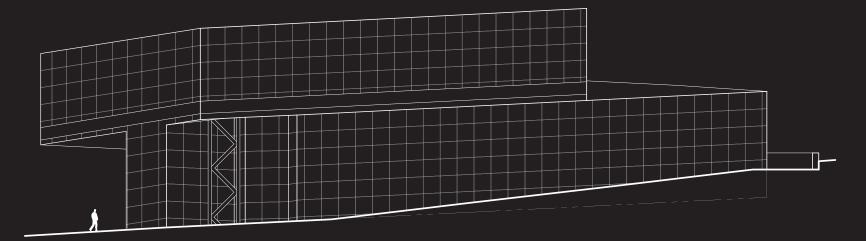
site plan



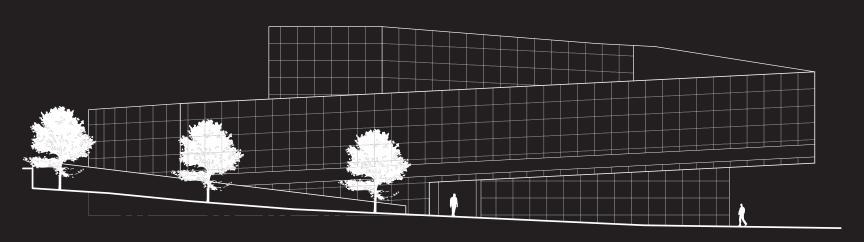




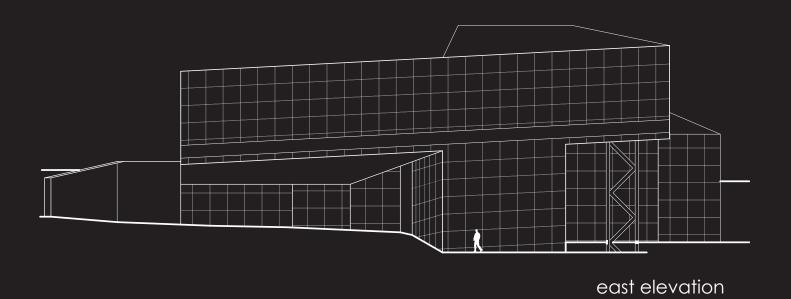
second floor plan



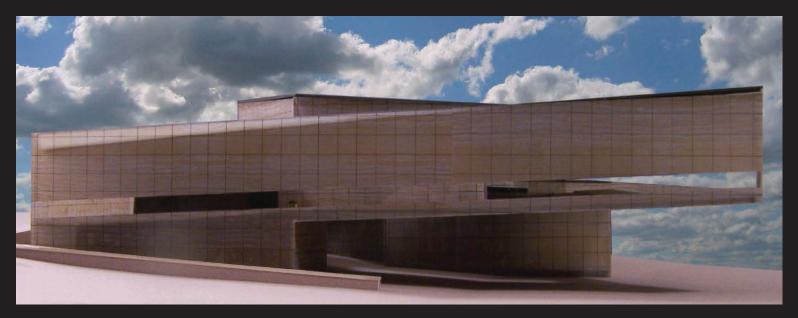
north elevation



south elevation



west elevation



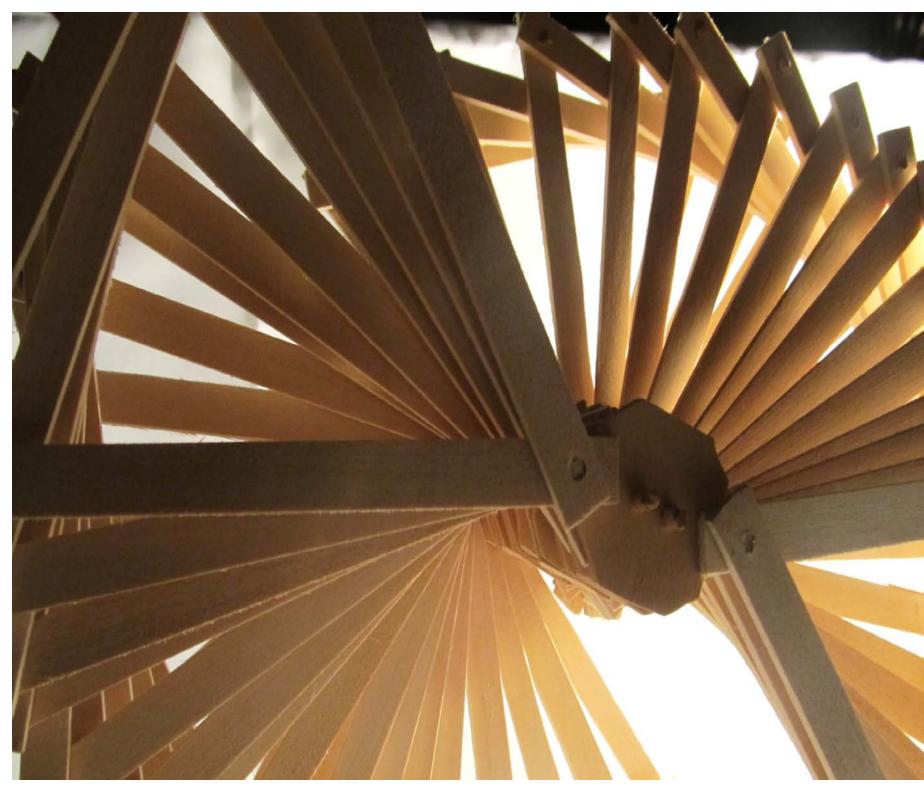


exterior perspectives





interior perspectives



Two Assemblages + One Joint:

Professor Oakley Fall 2012

Design Objective-

Design two stand alone assemblages, each with a minimum and maximum dimension, connected only by a joint.

Design-

Through the use of a repetition of lines, my first assemblage formed itself into a large rising spiral connected by small pin joints. The second assemblage consists of small multiple octogon shapes that are pierced by two small dowels, which lies in the center of the first assemblage. Meeting at the top the two assemblages are joined together through the use of a pin joint creating a well balanced object.











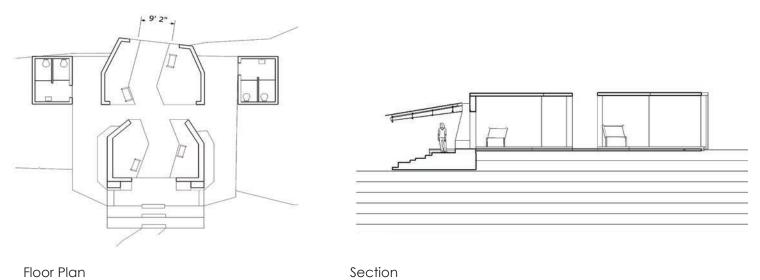


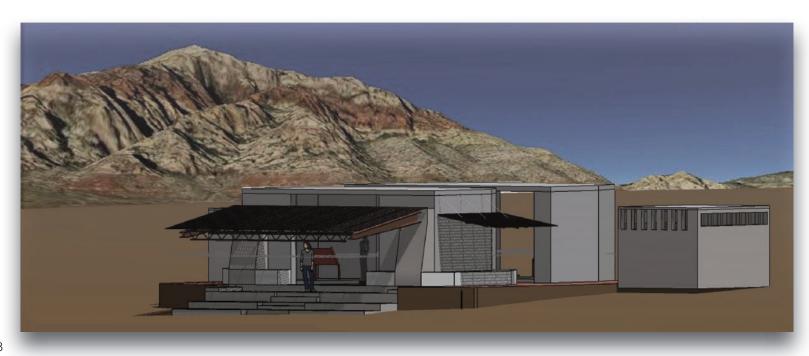


Pine Creek Trailhead Pavilion: **Design Objective-**Design an off the grid pavilion for visitors of the pine creek trailhead located in Red Rock Canyon, NV; that addresses the climate and topographic condition of the site. Design: The Pavilion rests on a secondary trail that begins at the parking lot and ends at the base of a hill connecting to the main trailhead. Implementing this trail allows hikers and visitors to be lead through a series of exhibits offering an educational insight to the pine creek trailhead before they begin their journey. Two hollowed concrete boxes form the sheltered area that houses the exhibits, connected by adjacent exterior seating areas. Perforated metal canopy surround the south end of the pavilion provideing shade to the exterior seating areas to offer a place of comfort from the desert sun to allow visitors to enjoy

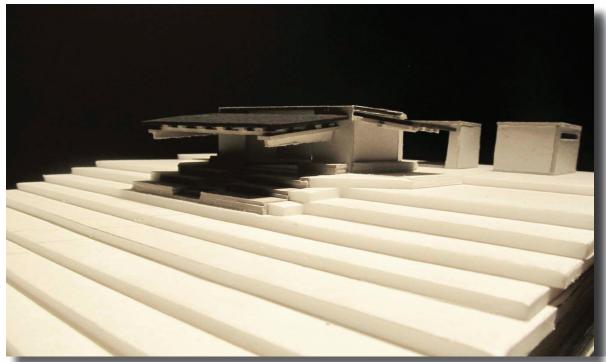
the views the canyon has to offer.

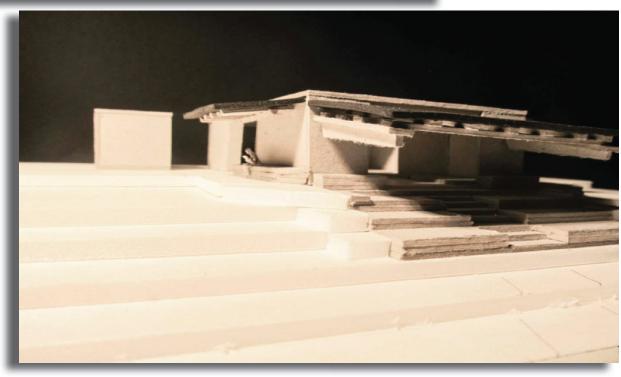






Model Photos:







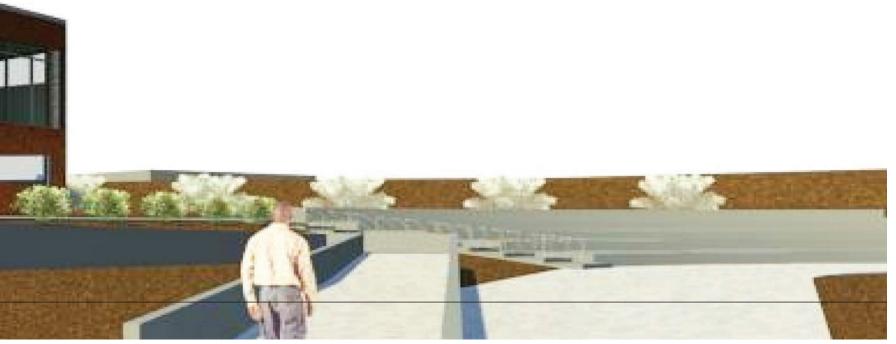
Henderson Branch Library

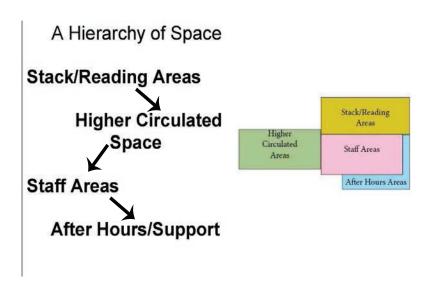
Design Objective-

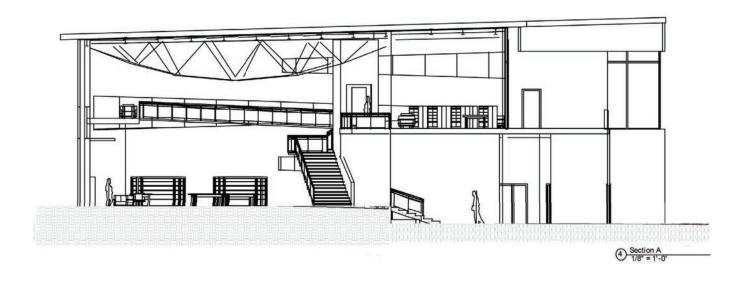
Design a branch library for the city of Henderson, NV. In which providing thoughtful programming to the spaces created, working with sloped terrian, and exterior event areas. The building is to be two stories tall with attention to the stair detail.

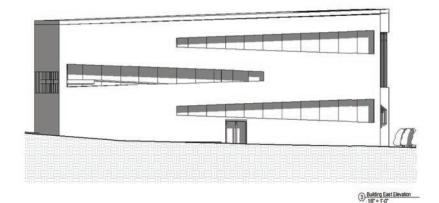
Design-

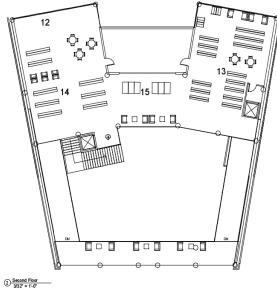
The Henderson Branch Library sits on a slight slope overlooking the vast city and park views. The idea of a serperation of space as well as a hiearchy of space drove the form of the building in which four levels were created; making the reading and stack areas the more dominant of the spaces.



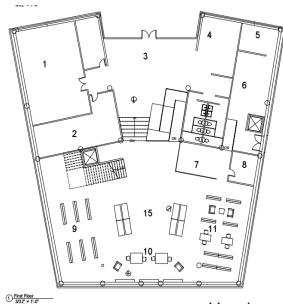








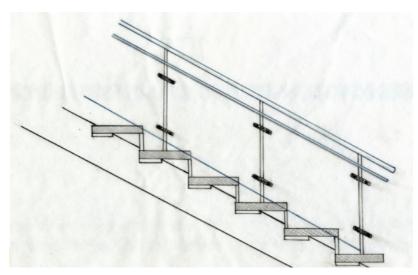
Legend: 1-Auditorium 2-Mech/Tech Rm 3-Lobby 4-Cafe 5-Staff Break Rm 6-Staff Work Rm 7-Circulation Desk 8-Librarian Office 9-Audio/Media Stacks 10-Current Periodicals 11-Reference/New Books 12-Storytime 13-Adult Stacks/ Reading Space 14-Children's Stacks/ Reading Space 15-Computers





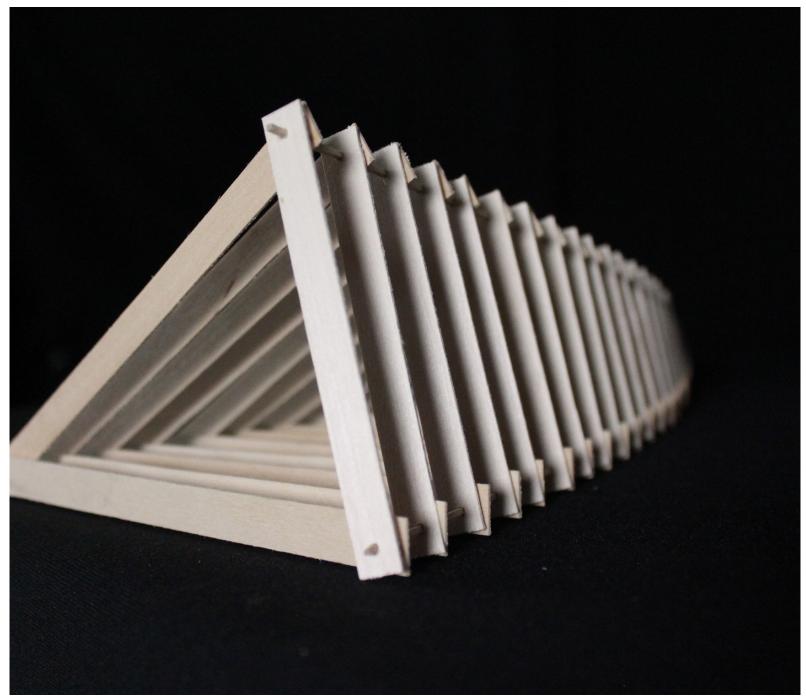






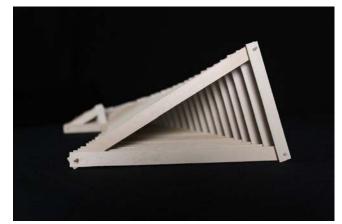


ANDREW MARTIN AAE 380 FALL SEMESTER

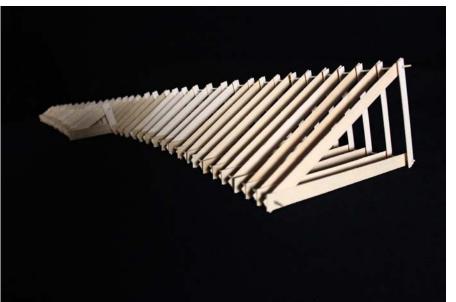


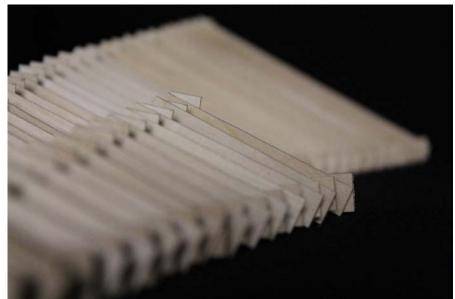
148









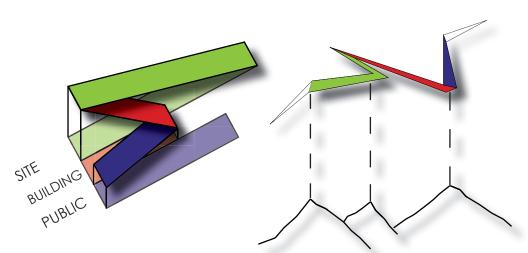


Achieving a sense of movement using parametrics.

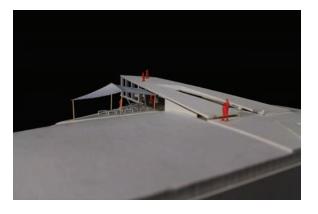


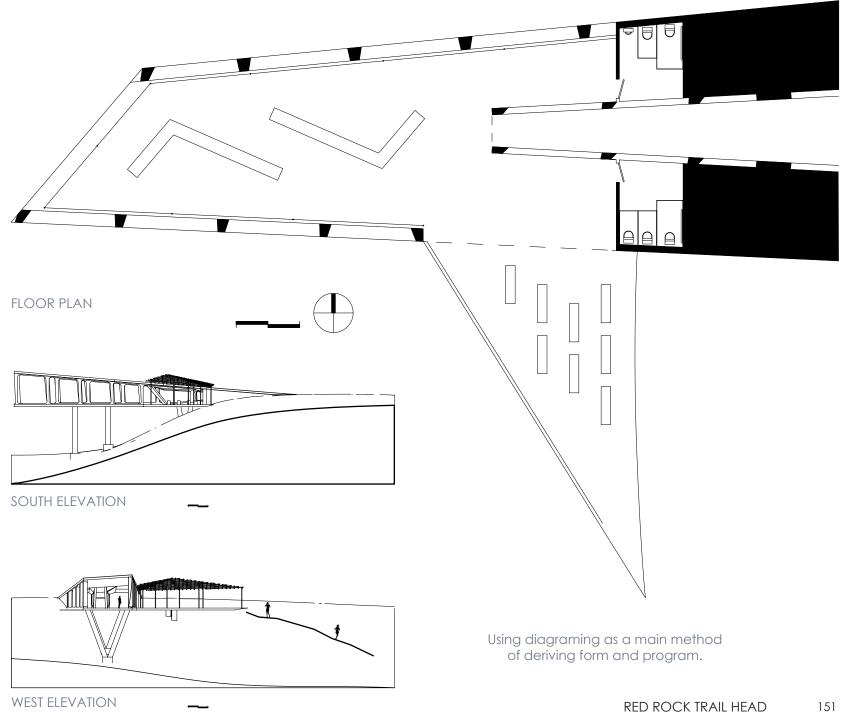








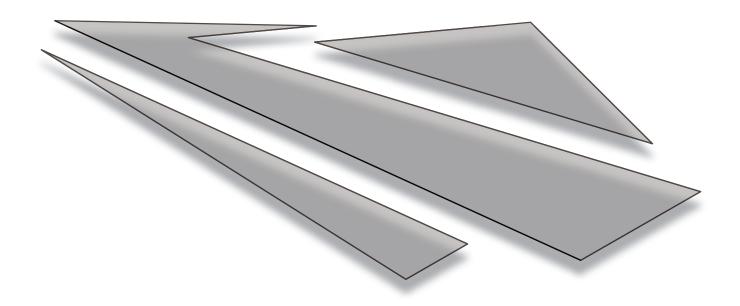




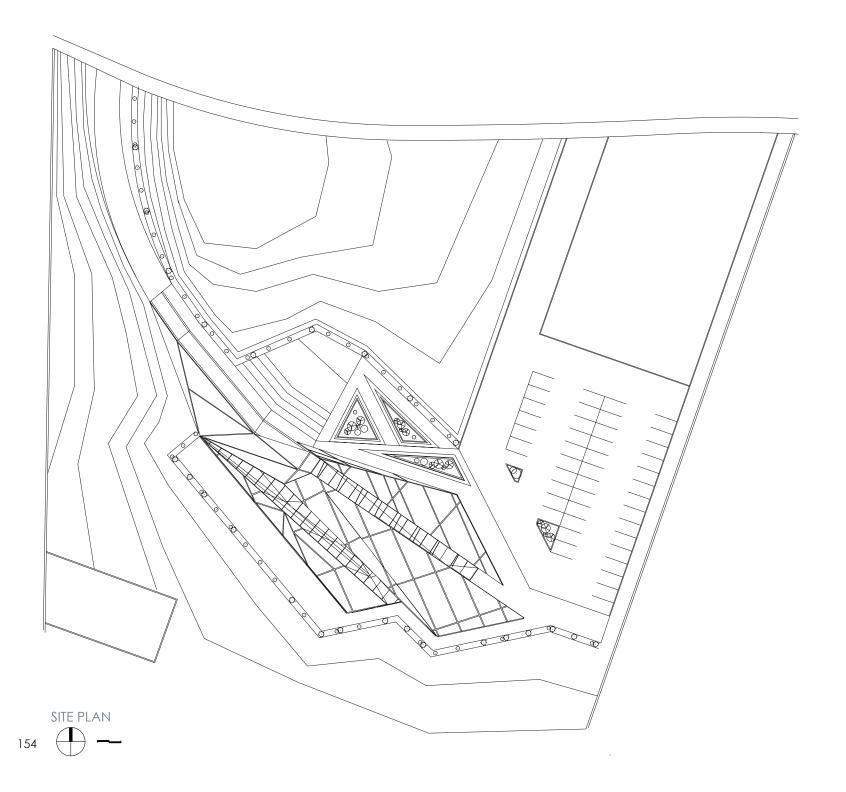


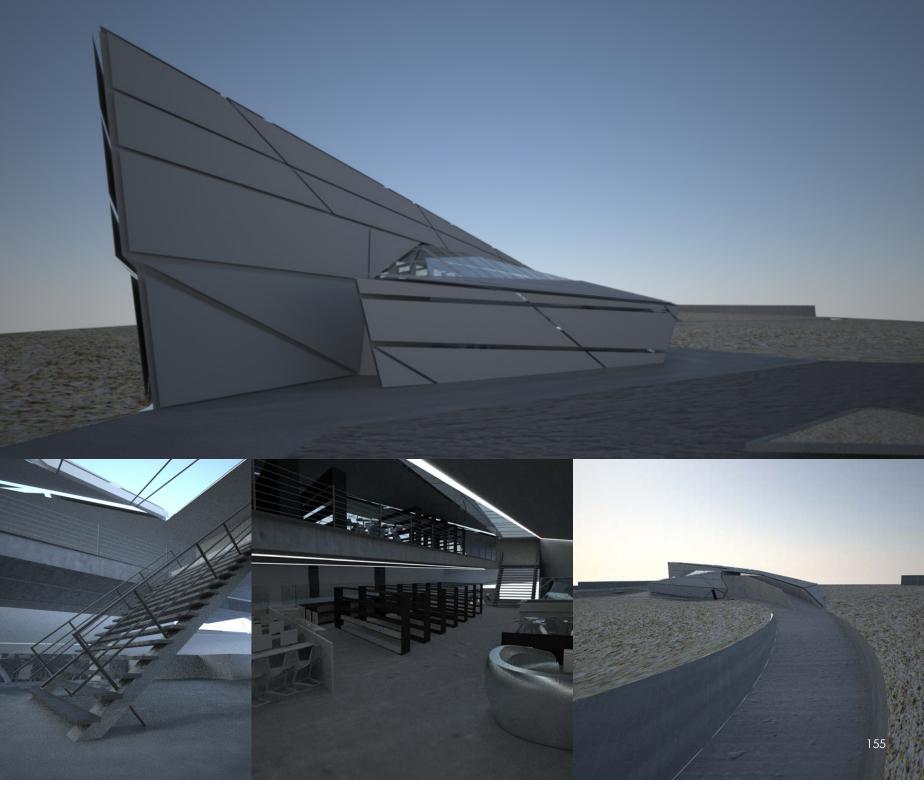


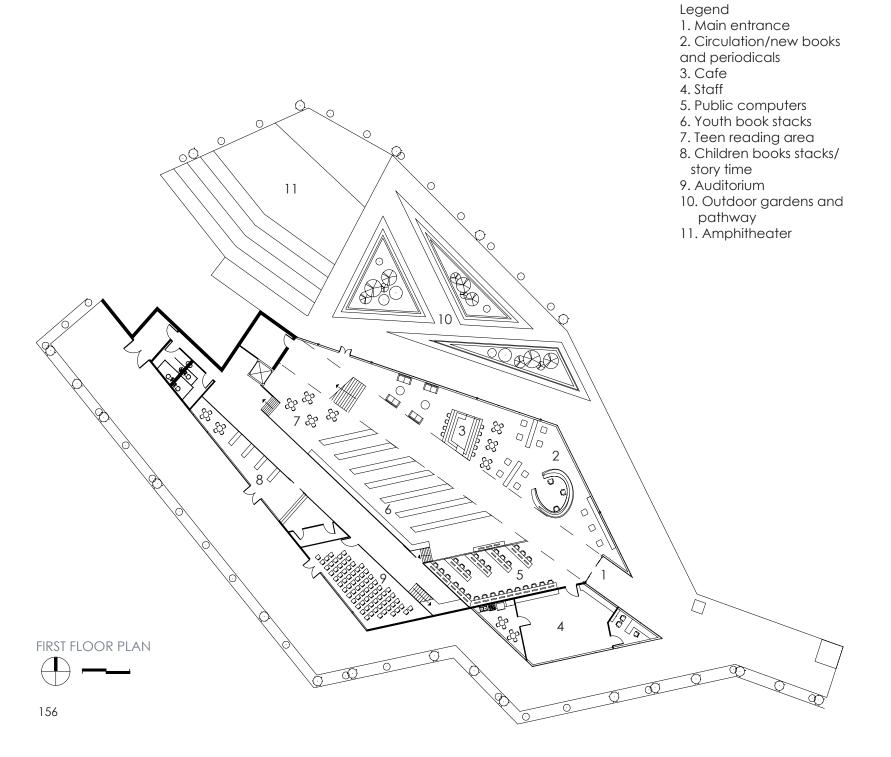
REPRESENTATION OF THE MODERN LIBRARY

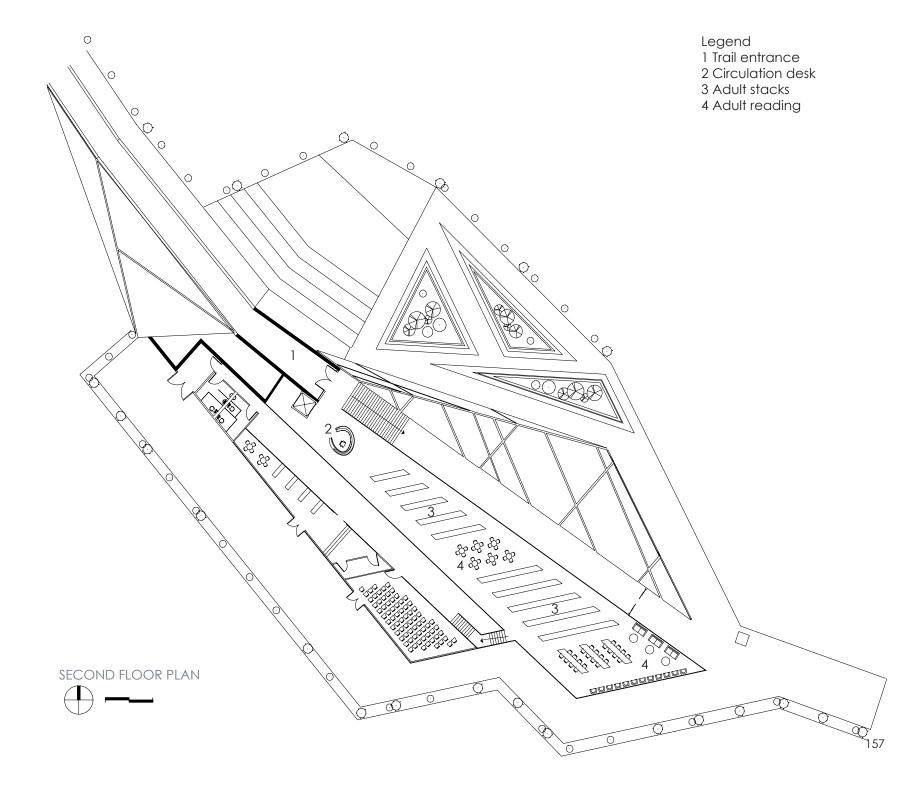


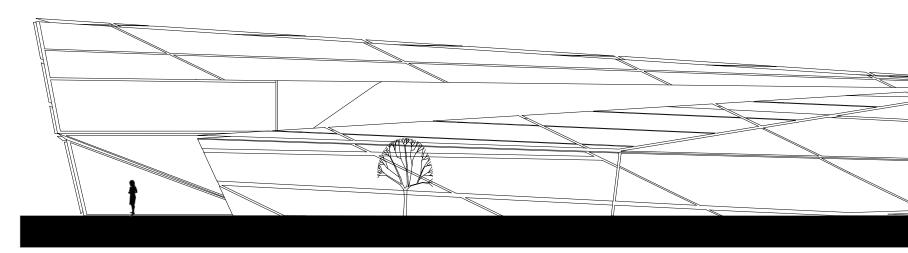
ABSTRACTION OF THE FINAL DIAGRAM TO DERIVE FORM PLAY ON SOLIDS AND VOIDS



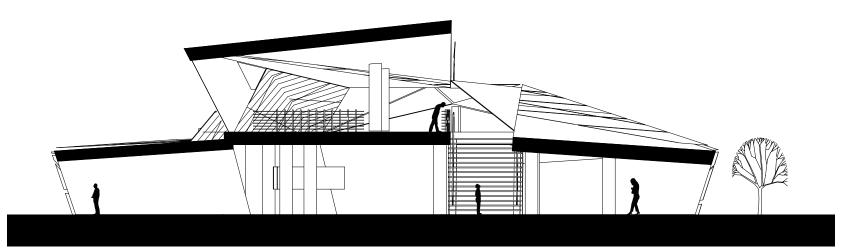




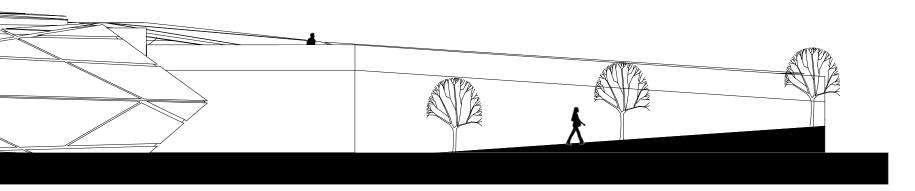


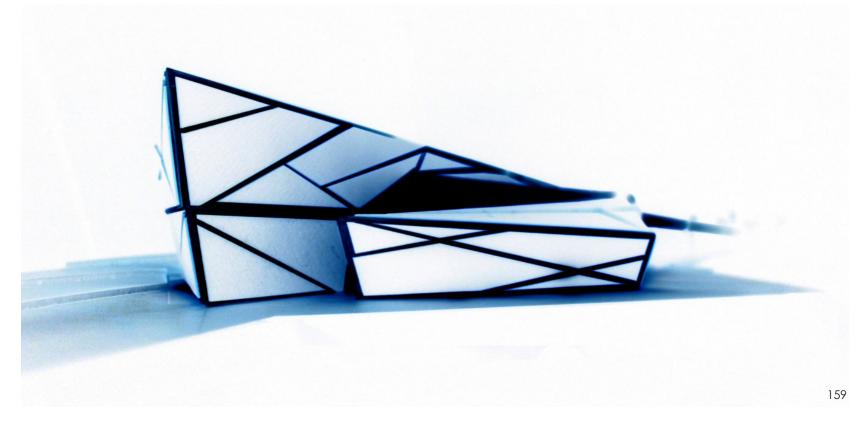


SOUTH ELEVATION



WEST SECTION







Sean Miller



- 1. an artistic composition made from scraps, junk, and odds and ends (as of paper, cloth, wood, stone, or metal
- 2. the act of assembling: the state of being assembeled.

joint:

- 1. a place where two things or parts are joined
- 2. the point of contact between two elements

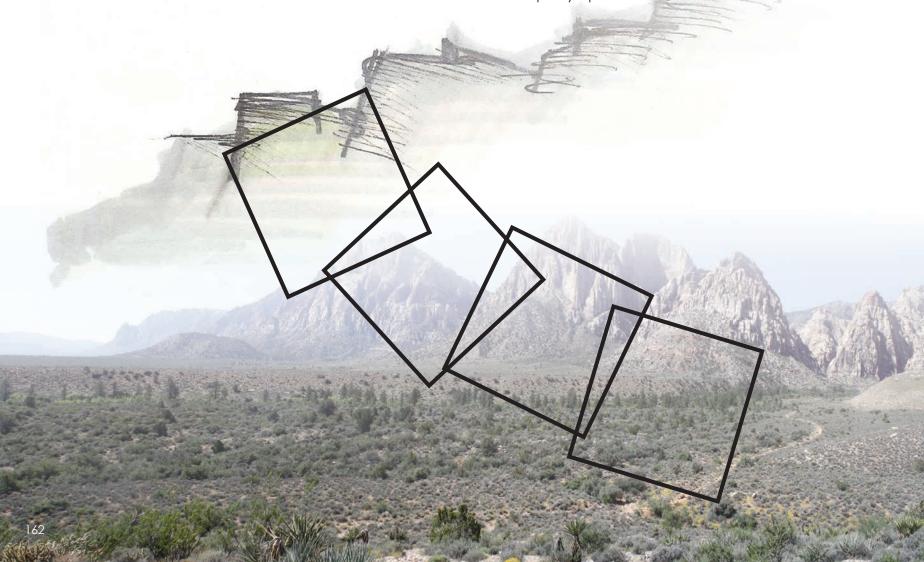
The main assemblage is penetrated by a thin strip that contrasts the rigid form of the larger peice. The first assemblage is made up of single strips that have been pinned together to create individual plates that are slotted together.

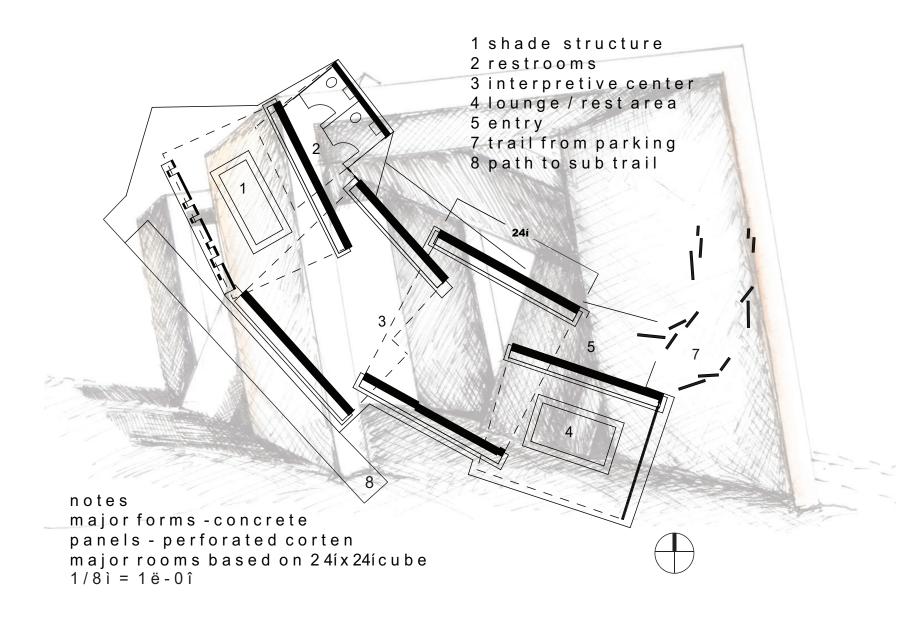


Red Rock Canyon - Trailhead

The trail head concept arose from the experience of walking the Pine Creek Trail. The uneven geology inspired the form of the building. The site has two distinct views to the south and the southwest that offer two different experiences. The south view offers a contrast of the desert and mountain ranges. The view to the southwest offers a connection with the trail and the mountain ranges.

The floor plan is open and inspires free movement. The seating is provided by imprenting the foundation to free views from traditional seating. The concrete form is peirced with long horizontal openings that frame the view to the southwest. The view to the southwest is completly open.







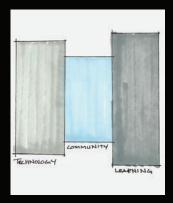




Henderson Branch Library

The Henderson Branch Library project is a 12,000 sqft. proposal set in mixed use suburbia. The concept of the design is program driven. The form is driven by the need to create visual interest on a site surrounded by ordinary views. The main reading room is projected out to creat a dynamic perspective view from the street.

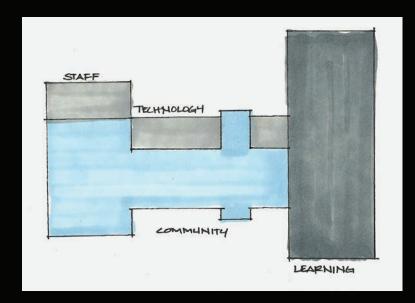
Traditional



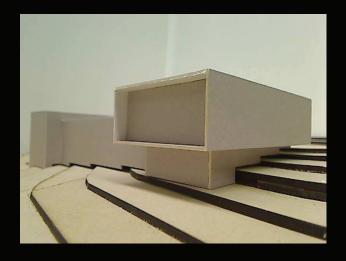
STAFF
TECHNOLOGY

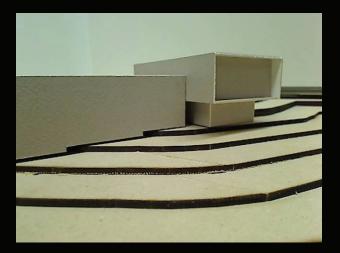
COMMUNITY

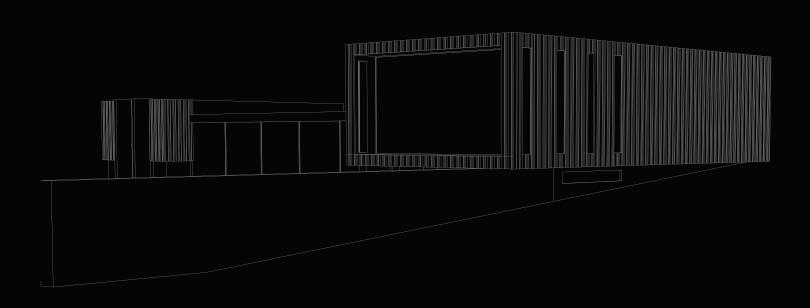
VS

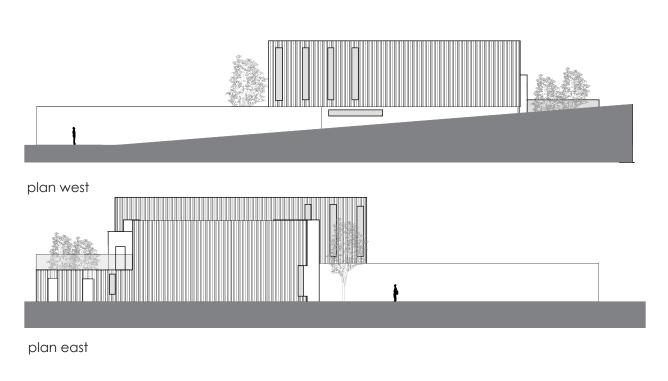


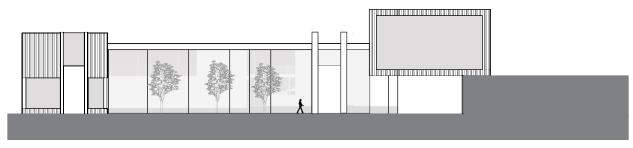
Non-Traditional



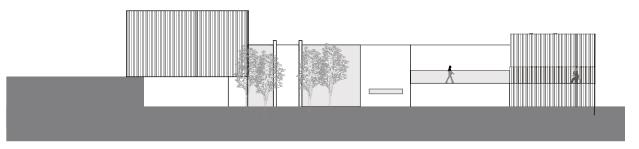




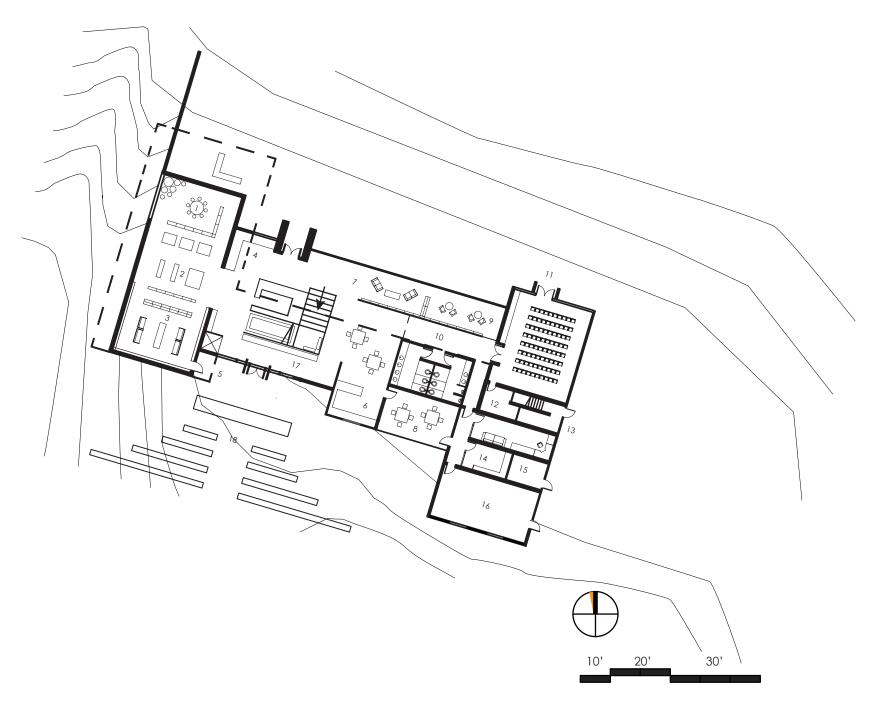


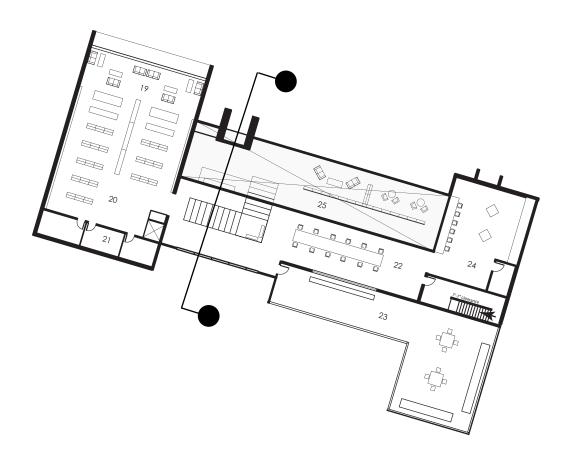


plan north



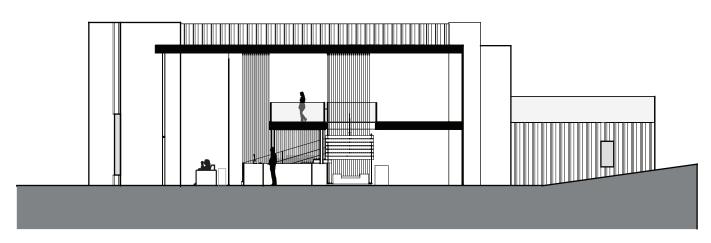
plan south





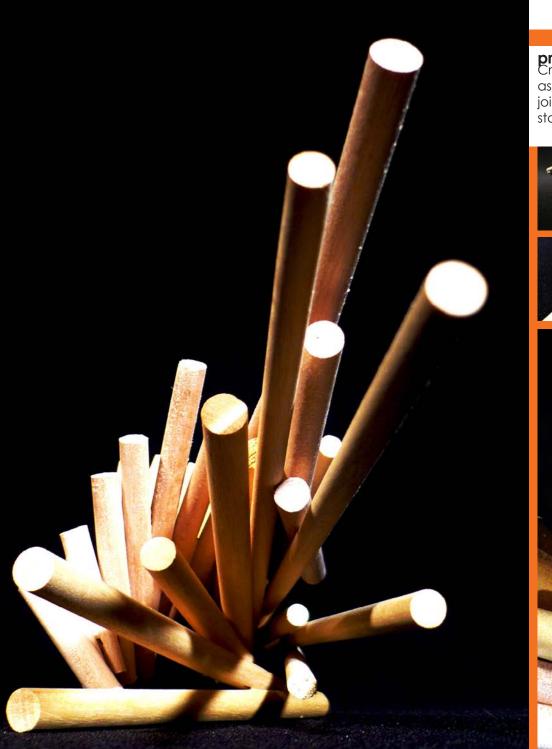
1. storytime 2. youth stacks 3.teen area 4. checkout 5. emergency exit 6. c af e 7. periodicals 8. outdoor seating 9. new books 10. restroom 11. off hours entrance/ meeting room 12.storage 13. fire stair 14. kitchen 15. mechanical 16. office 17. computer access 18. amphitheater 19. workroom 20. reading room 21. adult stacks 22. s t u d y 23. outdoor seating 24. computer lab 25. open to first floor

26. audio visual









problemCreate two hardwood, self supporting assemblages. Assemblages are to be joined without the aid of adhesives or standard mechanical fasteners.



TWO ASSEMBLAGES + ONE JOINT LOGAN ZIEGLER

solution

A multitude of jointing explorations were conducted with various wood types, such as birch plywood, dowels, and basswood. The explorations led to a focus on slotted joints, ending in a slotted dowel with a plywood connecting tab.

The final piece consisted of two assemblages, distinguished by wood grain and color, that slip together. Individual dowels are fastened together with a plywood tab pressed into carefully cut slots. The form was discovered through many tedious mock ups, piece by piece.

















Design a pavilion to be located at the Pine Creek Trailhead in Red Rock Canyon Las Vegas, Nevada. The facility must serve as a trailhead, interpretive center, refuge from the weather, and a scenic outlook.

concept

The Pine Creek Trailhead Pavilion concept is based on inspiration that can be found on site. An exploration in Biomimicry was conducted to create a protective skin of weathering steel, similar to reptile scales. Programmatically the building emulates the canyon to which it faces with two mass elements and a corridor.

Special attention was paid to the environment to make the pavilion as self-sufficient as possible. An innovative piezoelectric wind system is used to create power and a unique play on light in the corridor. Manipulation of entrance and exit openings is used to control wind velocities for passive cooling and user comfort. In the summer the skin blocks solar radiation from the concrete thermal masses, letting them cool the sheltered spaces. In the winter, the skin lets the sun penetrate it warming the shelter and charging the thermal masses with stored heat.

precedent

The Rick Joy, Desert Nomad House in Tucson, Arizona was a big influence in organizing the program into separate elements, which I was later able to reference back to the canyon.

The many lizards on the site influenced me to study their natural protections from the weather, which led me to a scale like protective skin.









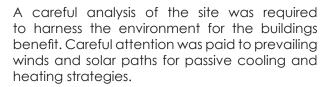






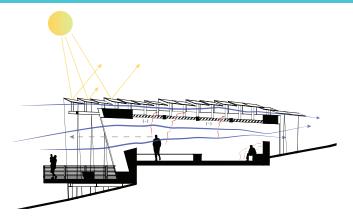




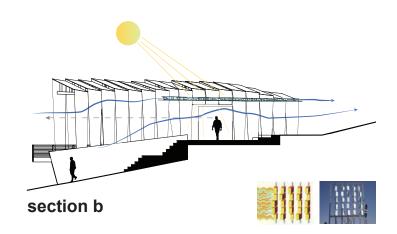




Massing models were used to test proportion and site presence. Additionally, isolated "skin" models were produced to test different arrangements of the steel panels for optimal shading.



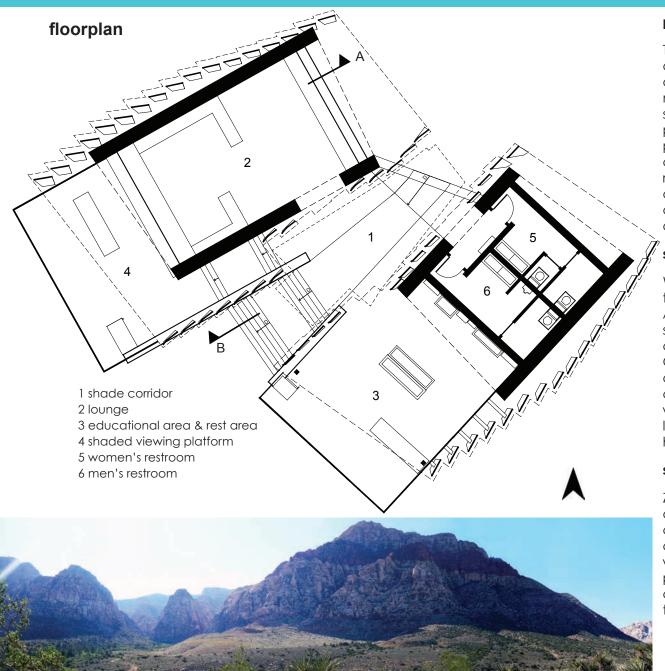
section a











program

The pavilion is entered by descending a hill on axis to a direct view of the canyons mouth. You move through a shaded corridor where light plays overhead from the piezoelectric wind system. Two concrete masses offer convinient restrooms and sheltered rest area. Two cantilevered decks are offered as viewing platforms, one housing interpretive displays.

section a

Winds slowed through a larger to smaller opening transition. A weathering steel skin blocks solar radiation, to let the heavy conrete act as a thermal mass. Operable louvers allow venting of rising heat pulled by a venturi created by the skin increasing wind velocity. In the winter, the louvers can be closed to trap heat from escaping.

section b

Zinc perforated panels house a piezoelectric wind system comprised of lightweight catchers that move in the wind and create electrons. The perforated panels filter light and cast the play of light created by the moving wind catchers within.







problem

Design a community branch library for Henderson, Nevada. The 12,000 +/- square foot program was to feature a meeting room, story time area, a main reading room. Special attention was to be given to the community connection and a stair detail.

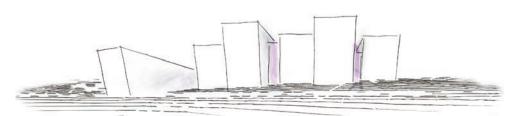
concept

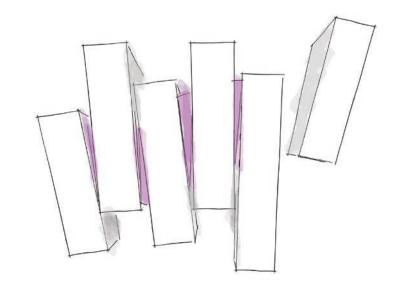
The Henderson Branch Library concept is an abstraction of geological structures. The building formally relates to the mountains that surround all sides of the Las Vegas valley.

In elevation the building emulates the ridge iconic ridge line of a mountain range. These masses hold true in plan, pushing, pulling, and twisting representing both the plate tectonics that created these mountains and an abstraction of geological strata.

Between the massings wrapped in brown-hued zinc paneling are translucent glass elements. These elements visually break up the masses, and are an abstraction of geode crystals, commonly found in Nevada. These elements define the interior spatially, and also serve the purpose of bringing in diffuse natural light by day and can be backlit various colors by night to create an atmosphere or signals.

Overall, the geological rooted concept was used as a common thread for all elements in the building, creating a seamless aesthetic and spatial experience.





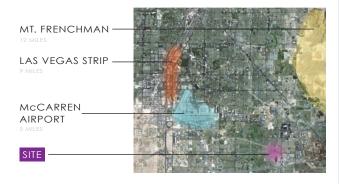






HENDERSON, NEVADA

36° 2'32.17"N 115° 3'16.62"W



SITE CONNECTION MAP



precedent

Visits to and analyses of renowned and published libraries in Phoenix, Arizona were conducted to study the work of other architects and the workings of a public libraries of various sizes and contexts.



ARABIAN LIBRARY PHOENIX, AZ

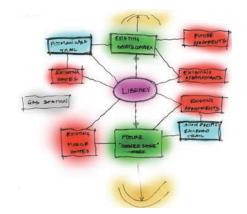
NATURE ABSTRACTED TO CREATE FORM

APPALOOSA LIBRARY PHOENIX, AZ

PROGRAM
SEPERATION BETWEEN
PUBLIC AND STAFF/
ANCILLARY

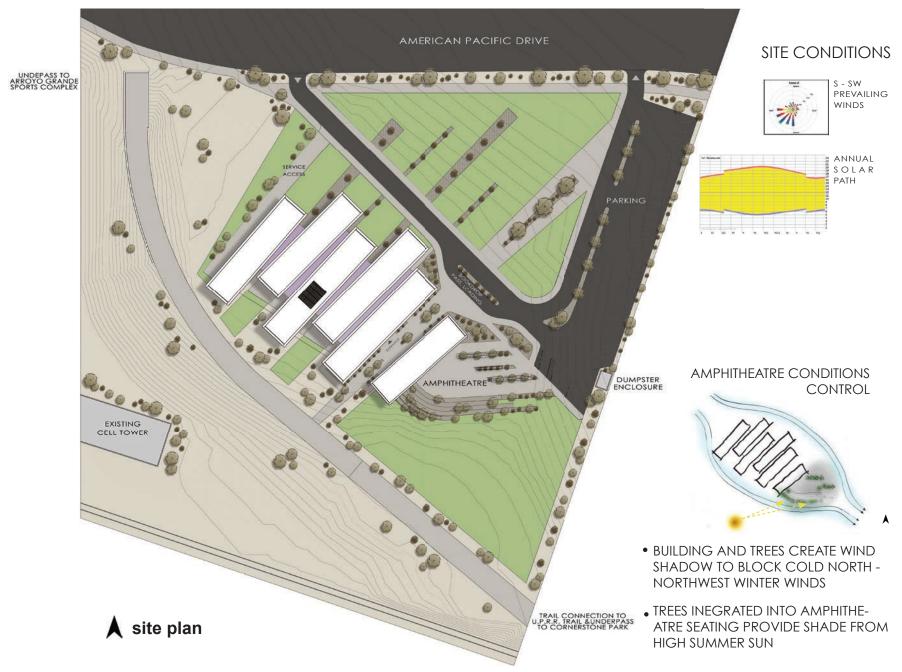
site

Special attention was given the community around the site. An connection and use analysis was conducted to solve site layout and later inform the program of the library. The site lays on axis with two major parks and is a destination on a major trail system, both of which extend the reach of the library and its purposes.



- LIBRARY IS CENTRAL HUB FOR COMMUNITY
- GATEWAY BETWEEN PARKS
- DESTINATION ON MAJOR TRAIL
- PARKS AND TRAILS EXTEND REACH

HENDERSON BRANCH LIBRARY LOGAN ZIEGLER



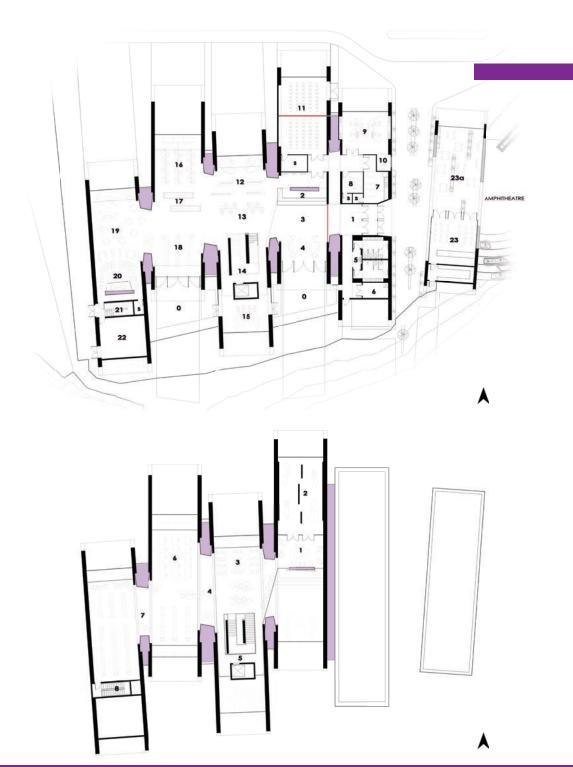
first floor

- 1. ENTRY
- 2. CIRCULATION DESK
- 3. LOBBY
- 4. PERIODICALS
- 5. RESTROOMS
- 6. CUSTODIAL CLOSET
- 7. BREAKROOM/ KITCHENETTE
- 8. LIBRARIAN'S OFFICE
- 9. WORK ROOM
- 10. BOOKDROP WINDOW
- 11. MEETING ROOM
- 12. REFERENCE/ NEW BOOK & READING
- 13. CATALOG
- 14. STAIRS AND ELEVATOR
- 15. TEEN AREA
- 16. COMPUTER AREA & LAPTOP STATION
- 17. AUDIO/ VISUAL STACKS
- 18. YOUTH STACKS
- 19. YOUTH READING
- 20. STORYTIME
- 21. FIRE STAIR
- 22. MECH/ TELECOM ROOM
- 23. CAFÉ
- 23a. OUTDOOR SEATING
- 0. SECURE OUTDOOR READING
- S. STORAGE

second floor

- 1. GALLERY/ MULTI-PURPOSE
- 2. GALLERY READING
- 3. GROUP STUDY
- 4. MAIN READING
- STAIRS AND ELEVATOR
- 6. INDIVIDUAL STUDY
- 7. ADULT STACKS
- 8. FIRE STAIR







southeast elevation

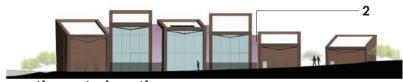




1. PIGMENTO ZINC PANELING

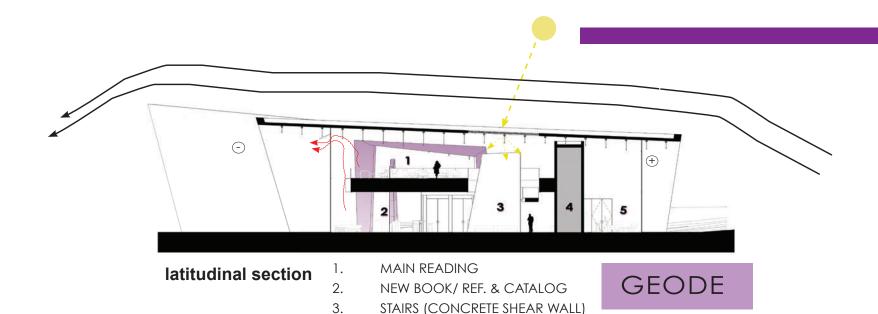


2. TRANSLUCENT
GLASS BACKLIT WITH
LED LIGHTING



southwest elevation





FLEVATOR CORE

TEEN AREA

natural ventilation

ROOF SLOPE FORMS A HALF VENTURI, CREATING A NEGATIVE PRESSURE ON THE NORTHEASTERN FACADE FROM OVERPASSING PREVAILING WINDS. OPERABLE HOPPER WINDOWS ALLOW RISING HEAT TO BE VENTED AT AN ACCELERATED RATE.

4.

5.

structure

SIMPLE KING POST TRUSSES ARE FRAMED WITHIN EACH BUILDING BAY. TRUSSES VARY IN DEPTH THROUGH OUT THE LENGTH OF THE BAY, CREATING A WAVE VISUAL. THIS WAVING OF THE TRUSSES IS MEANT TO EVOKE THE IMAGE OF A CAVE CEILING, AS WELL AS GIVE SUBTLE CONTRAST TO THE BUILDINGS SHARP ORTHOGONAL FORMS.

SKYLIGHT PLACED ABOVE STAIR HAS LOUVERS TO DIFFUSE THE LIGHT, WASHING THE CONCRETE SLAB SHEAR WALLS FROM WHICH THE STAIRS ARE CANTILEVERED, CREATING A INTERESTING VISUAL.

daylighting

OPAQUE GLASS "GEODES" BRING DIFFUSE LIGHT INTO ROOMS, AND ARE BACK LIT AT NIGHT.

SKYLIGHT PLACED ABOVE STAIR HAS LOUVERS TO DIFFUSE THE LIGHT, WASHING THE CONCRETE SLAB SHEAR WALLS FROM WHICH THE STAIRS ARE CANTILEVERED, CREATING A INTERESTING VISUAL.

NORTH FACING DOUBLE HEIGHT GLAZING BRINGS IN QUALITY LIGHT WITH NO HEAT GAIN. SOUTHERN GLAZING HIS ADEQUATELY SHADED TO REDUCE HEAT GAIN IN COOLING MONTHS, WHILE BRINGING IN AMPLE LIGHT.



longitudinal section

GEODE

- ADULT STACKS
- 2. ADULT READING & INDIVIDUAL STUDY
- 3. ADULT MAIN READING
- 4. LOBBY AND CIRCULATION DESK
- 5. YOUTH READING

- AUDIO/ VISUAL AND COMPUTER AREA
- 7. NEW BOOK/ REF. AND CATALOG
- 8. ENTRY

6.

- 9. OUTDOOR GATEWAY
- 10. CAFE
- 11. AMPHITHEATRE





