

# ARCHITECTURAL PORTFOLIO

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*Liam Jones*

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LIAM  
JONES

# INTRODUCTION

## ABOUT ME

HELLO, MY NAME IS LIAM JONES AND I AM FROM READING, PENNSYLVANIA. I'M A BIT OF A WORKAHOLIC AT TIMES, BUT THE WORK I DO BRINGS ME JOY. EVER SINCE I CAN REMEMBER, I HAVE GRAVITATED TOWARDS DESIGN AND CREATIVE EXPRESSION.

THROUGHOUT MY LIFE, I HAVE EXPLORED NATIONAL LANDMARKS SUCH AS THE GRAND CANYON AND INTERNATIONALLY TO LONDON AND PARIS. DURING MY TRAVELS, MY EXPERIENCES HAVE EXPOSED ME TO THE WONDERS OF CULTURE AND BEAUTY THAT THE WORLD HOLDS, AS WELL AS THE IMPACT THAT SOCIETY HAS ON ENVIRONMENT. RESPONSIBLE DESIGN CAN EFFECT POSITIVE CHANGE ON PEOPLE AND THE SURROUNDING CONTEXT, AND IS WHAT DRIVES ME TO PURSUE MY PATH IN DESIGN AS AN ASPIRING ARCHITECT AND COMMUNITY LEADER.

## DESIGN PHILOSOPHY

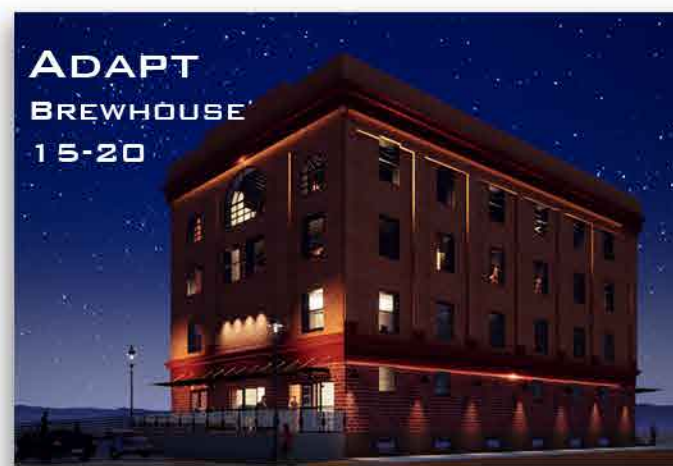
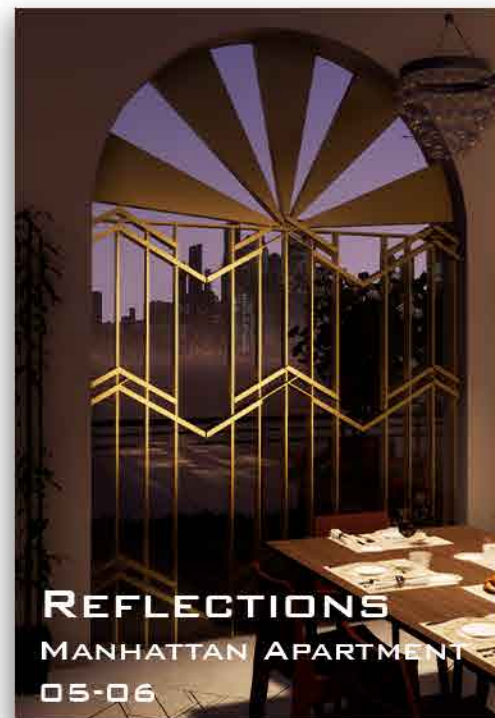
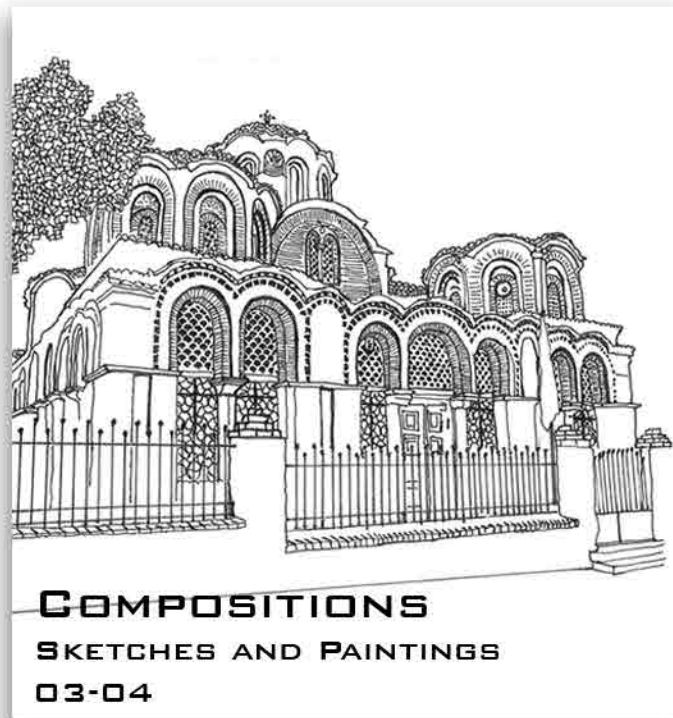
ARCHITECTURE IS THE EMBODIMENT OF SOCIETIES ASPIRATIONS. FROM THE LARGEST HIGH-RISE, TO THE SMALLEST HOME, EACH STRUCTURE SHOULD EVOKE EMOTION AND RESPOND TO ITS CONTEXT.



**“THERE’S WAY TO DO IT BETTER - FIND IT”  
- THOMAS A. EDISON**

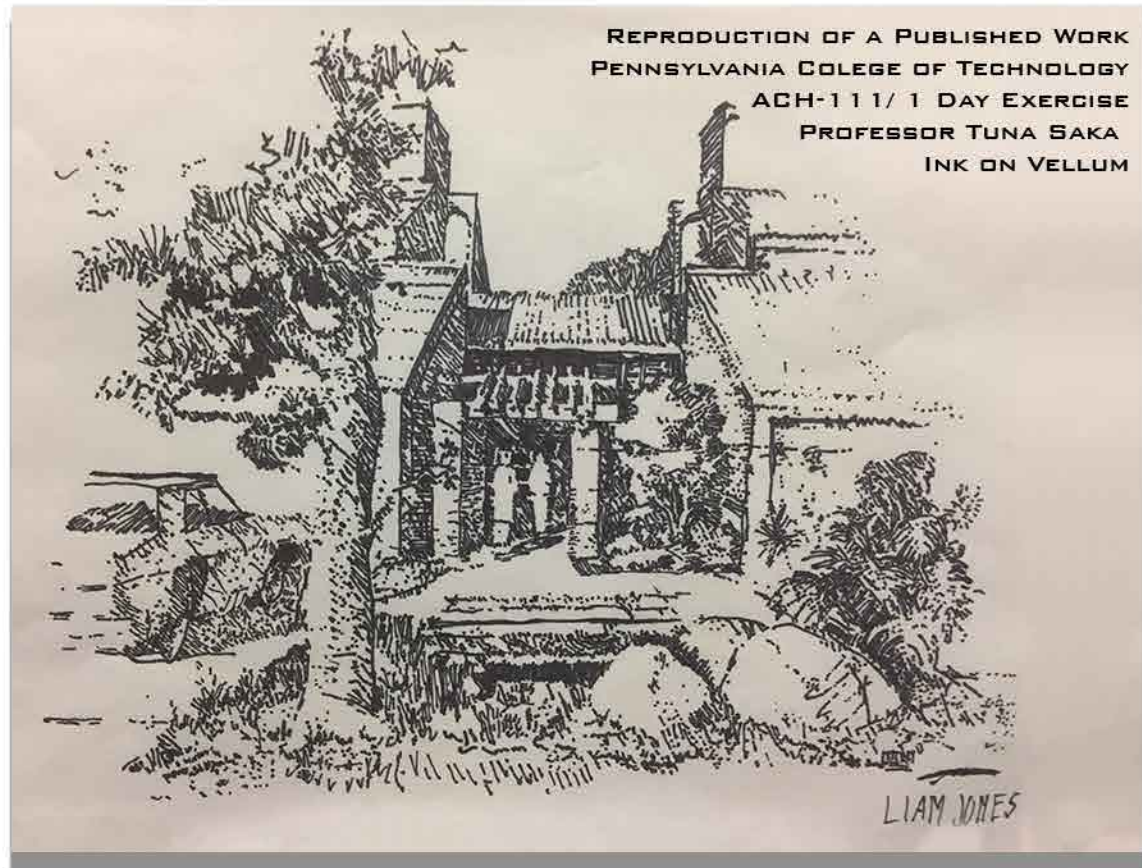


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# COMPOSITIONS - STUDY SKETCHES

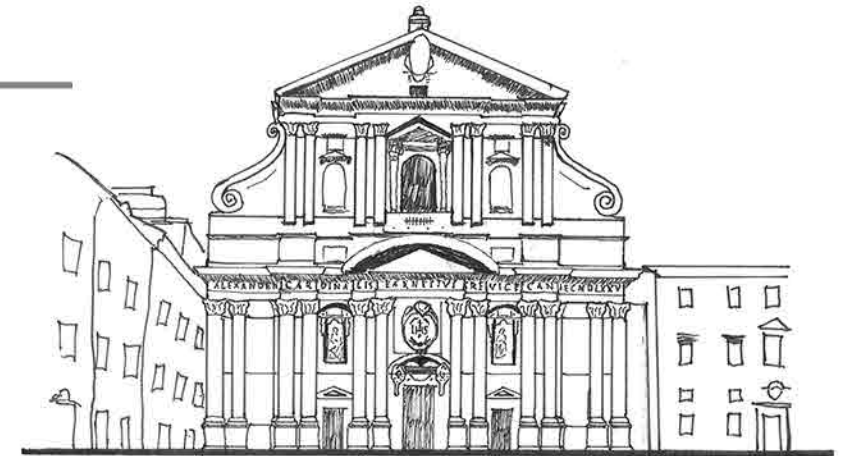


REPRODUCTION OF A PUBLISHED WORK  
PENNSYLVANIA COLLEGE OF TECHNOLOGY  
ACH-111 / 1 DAY EXERCISE  
PROFESSOR TUNA SAKA  
INK ON VELLUM

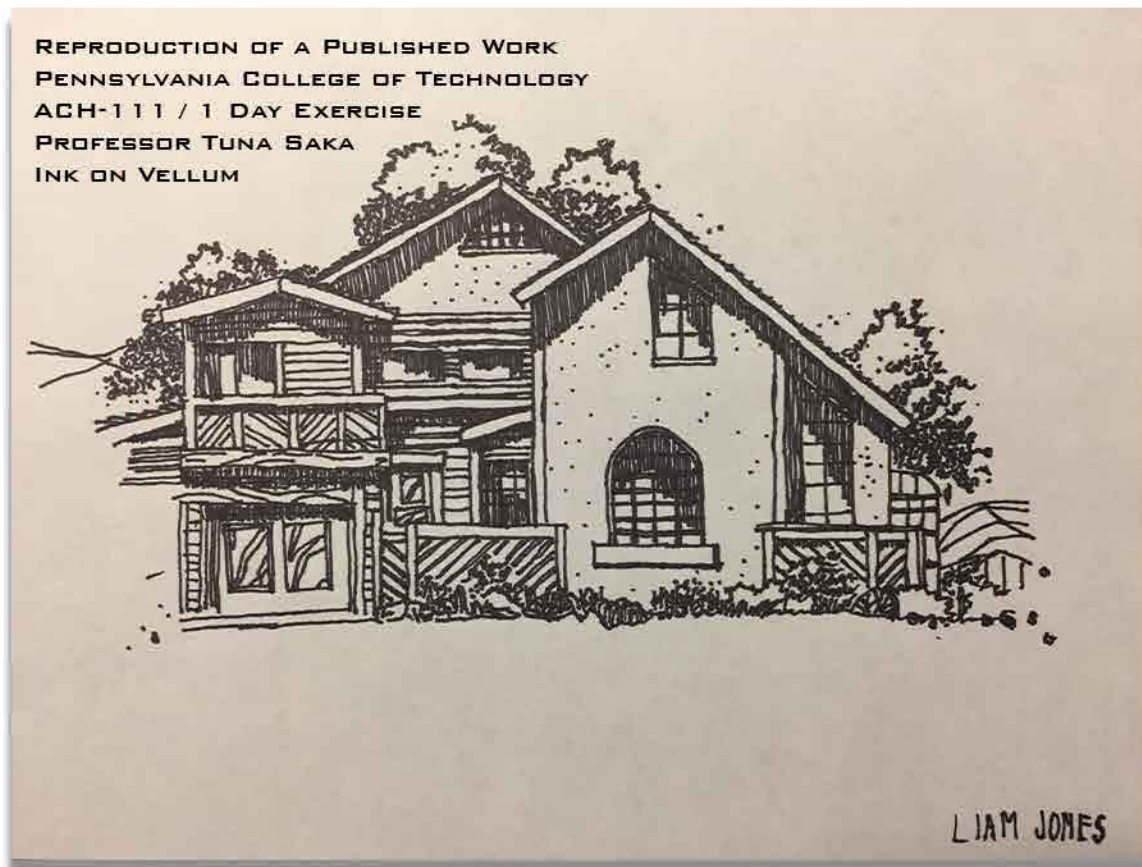
LIAM JONES



ACROPOLIS SKETCH  
PENNSYLVANIA COLLEGE OF TECHNOLOGY  
ACH-112 / 1 DAY EXERCISE  
PROFESSOR ROBERT WOZNAK  
INK ON PAPER

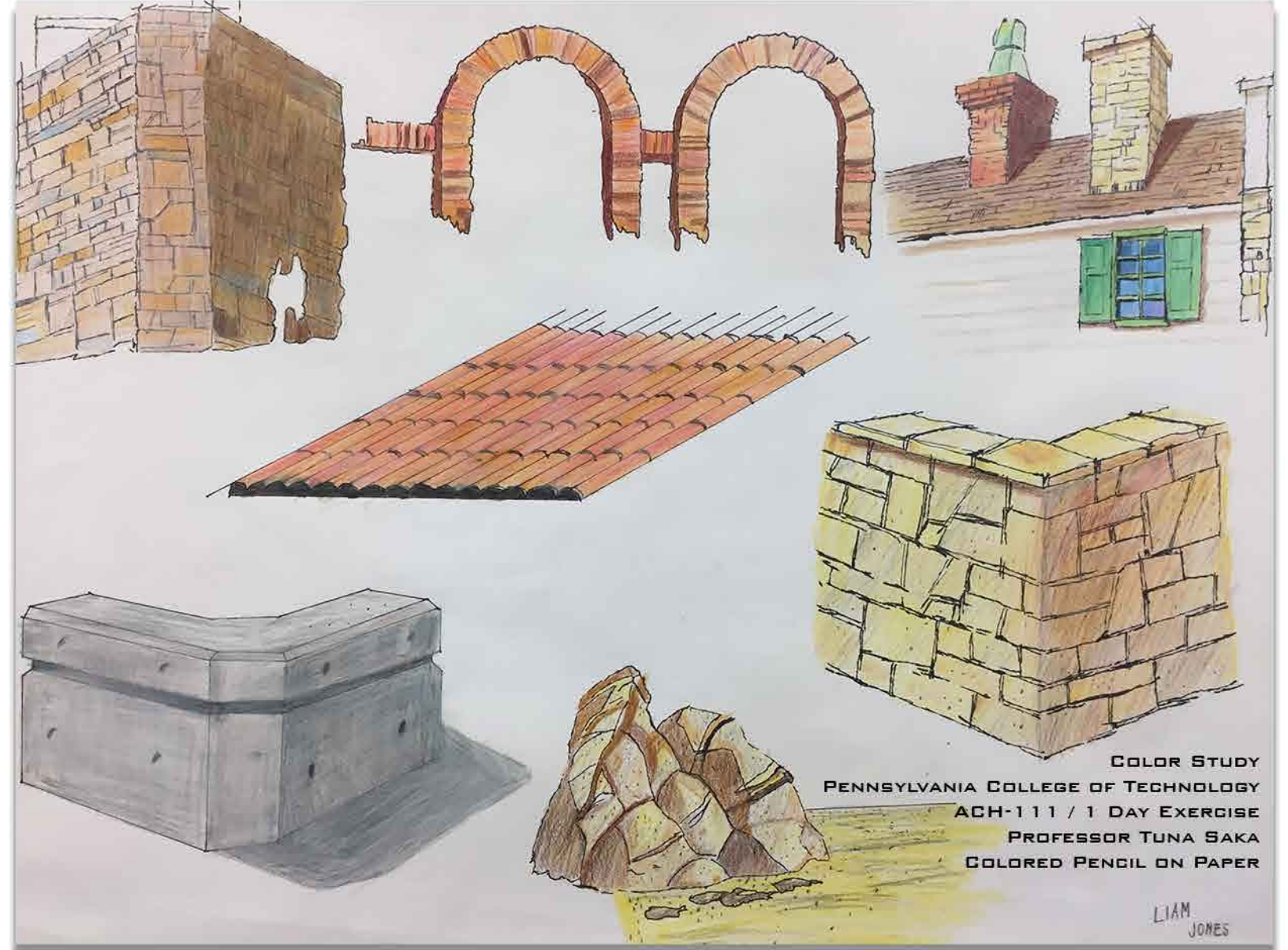


CHURCH OF THE GESU SKETCH  
PENNSYLVANIA COLLEGE OF TECHNOLOGY  
ACH-112 / 1 DAY EXERCISE  
PROFESSOR ROBERT WOZNAK  
INK ON PAPER



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PROFESSOR TUNA SAKA  
INK ON VELLUM

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COLOR STUDY  
PENNSYLVANIA COLLEGE OF TECHNOLOGY  
ACH-111 / 1 DAY EXERCISE  
PROFESSOR TUNA SAKA  
COLORED PENCIL ON PAPER

LIAM JONES



# ACRYLIC POUR ART

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**"ELECTION DAY"**  
PERSONAL PRODUCTION  
2 DAY EXERCISE  
ACRYLIC POUR ON CANVAS  
10/30/2020



**"PRESSURE"**  
PERSONAL PRODUCTION  
1 DAY EXERCISE  
ACRYLIC POUR ON CANVAS  
9/18/2020

**"CLOUDS OF NEPTUNE"**  
PERSONAL PRODUCTION  
3 DAY EXERCISE  
ACRYLIC POUR ON CANVAS  
9/14/2020





# REFLECTIONS



## MANHATTEN APARTMENTS

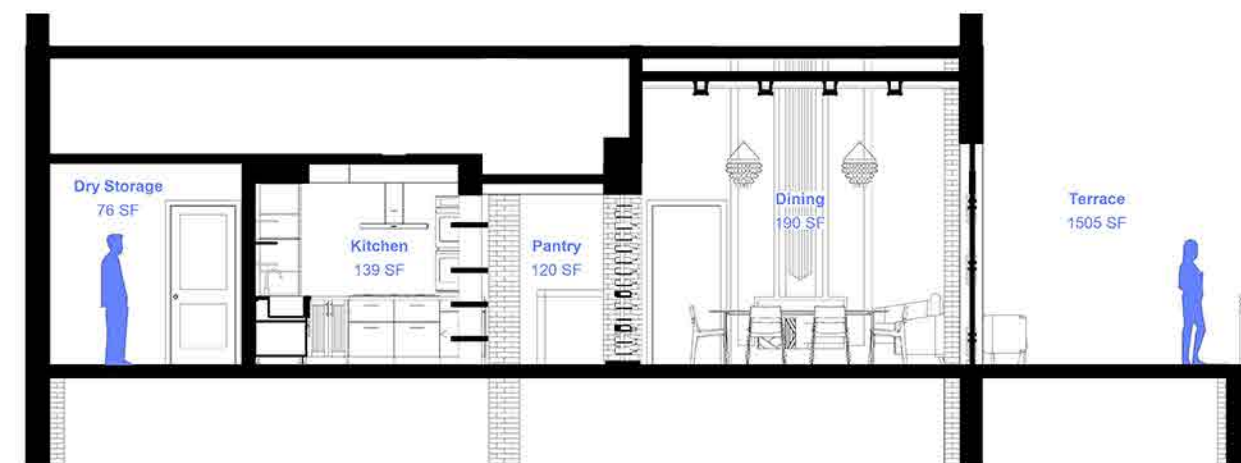
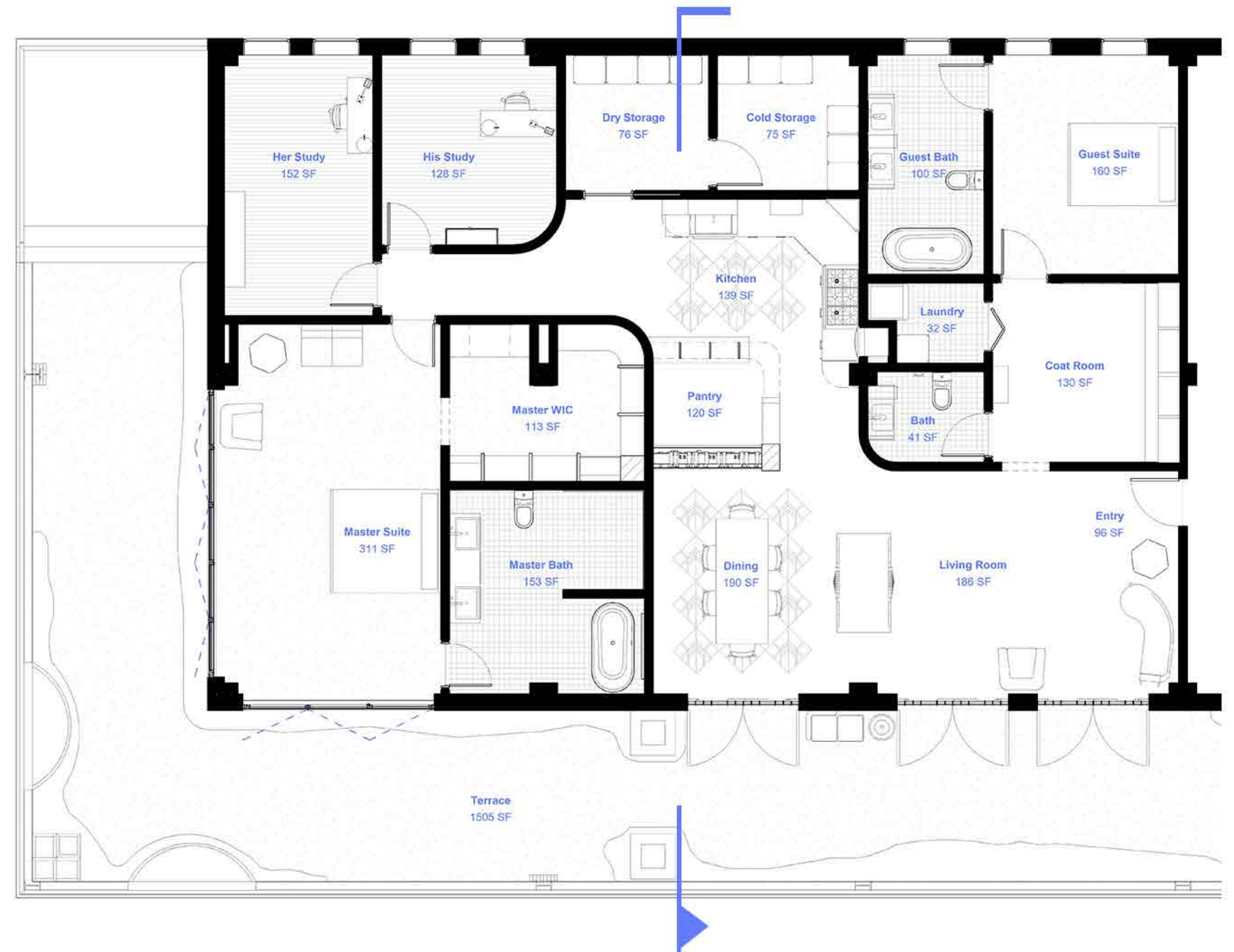
PENNSYLVANIA COLLEGE OF TECHNOLOGY  
AGH-261/ 2 WEEK GROUP PROJECT  
PROFESSOR DANIEL BROOKS  
AUTODESK REVIT & TWINMOTION

### PROJECT DESCRIPTION

THIS GROUP PROJECT SPANNED TWO WEEKS AND WAS COMPOSED OF TWO OTHER MEMBERS. THE BRIEF CHALLENGED US TO CREATE A STUDIO APARTMENT IN CENTER CITY NEW YORK, N.Y. WITH THE SHELL OF AN EXISTING BUILDING IN MIND. WE WERE GIVEN A TYPICAL 15'X15' COLUMN GRID AND ASKED TO PROVIDE ACCOMMODATIONS FOR A RESIDENCE WITH A GUEST SUITE, AS WELL AS PROVIDE OFFICES FOR THE MAIN TENANTS.

### PROJECT APPROACH

TAPPING IN TO THE HISTORY OF THE STRUCTURE, OUR GROUP CHOSE TO PURSUE AN ART DECO STYLE OF DESIGN. MY RESPONSIBILITIES WITHIN THE PROJECT WERE TO ASSIST WITH THE PRELIMINARY DESIGN, CREATE REVIT AND TWINMOTION MODELS, AND GENERATE PRESENTATION SECTIONS AND FLOOR PLANS.





# RENDERINGS



**DINING ROOM**



**VIEW OF FIREPLACE**



**BUTLER'S PANTRY**



**KITCHEN**



**MASTER BATH**



**HER OFFICE**



**MASTER BEDROOM**



# SHIFT

## MIXED-USE BUILDING

PENNSYLVANIA COLLEGE OF TECHNOLOGY  
 ACH-261/ 2 WEEK GROUP PROJECT  
 PROFESSOR DANIEL BROOKS  
 AUTODESK REVIT & TWINMOTION

### FIRST FLOOR



#### CRAFT SHOP

- 01 - RETAIL SPACE
- 02 - RECEIVING/STORAGE
- 03 - BATHROOM
- 04 - MANAGER'S OFFICE

#### BOOK STORE

- 05 - RETAIL SPACE
- 06 - CAFE
- 07 - BATHROOM
- 08 - OVERSTOCK
- 09 - MANAGER'S OFFICE
- 10 - RECEIVING

### SECOND FLOOR



#### ARCHITECTURE OFFICE

- 11 - RECEPTION
- 12 - BATHROOM
- 13 - STORAGE
- 14 - PRINT ROOM
- 15 - GALLERY
- 16 - BOOK KEEPING
- 17 - PRINCIPAL
- 18 - PROJECT MANAGER
- 19 - RESOURCE LIBRARY
- 20 - PRINCIPAL
- 21 - SPEC. WRITER
- 22 - CONFERENCE ROOM
- 23 - KITCHENETTE
- 24 - BATHROOM
- 25 - STUDIO
- 26 - TERRACE

### THIRD FLOOR



#### APARTMENT 01

- 27 - LIVING ROOM
- 28 - KITCHEN
- 29 - MASTER BEDROOM
- 30 - MASTER BATHROOM
- 31 - BATHROOM
- 32 - LAUNDRY ROOM

#### APARTMENT 02

- 33 - LIVING ROOM
- 34 - BATH ROOM
- 35 - KITCHEN
- 36 - GUEST BEDROOM
- 37 - MASTER BEDROOM
- 38 - MASTER BATHROOM
- 39 - TERRACE

#### PROJECT DESCRIPTION

CONSISTING OF TWO STORES, AN ARCHITECTURAL OFFICE, AND TWO APARTMENTS, THIS GROUP PROJECT WAS MY FIRST INTRODUCTION TO COMMERCIAL DESIGN.



# EXTERIOR PERSPECTIVE & SECTIONS



CROSS SECTION

## DESIGN APPROACH

THE GROUP DECIDED TO HAVE THE BUILDING FOLLOW AN EXISTING EASEMENT ON SITE, AND DEDICATE PARKING TO BE PLACED ADJACENT TO THE EASEMENT. STAGGERING THE FLOOR PLATE CREATED EXTERIOR BALCONIES FOR BOTH THE ARCHITECTURAL OFFICE AND TENANT SPACES. USE GROUPS TAKE ADVANTAGE OF VERTICAL SEPARATION, WITH STAIR TOWERS FLANKING EITHER END OF THE STRUCTURE. THE FACADE DESIGN WAS INSPIRED BY THE SURROUNDING CONTEXT OF LOCKHAVEN, P.A. I WAS PERSONALLY RESPONSIBLE FOR THE LAYOUT OF THE FLOOR PLANS, AS WELL AS THE FORM FOR THE BUILDING.



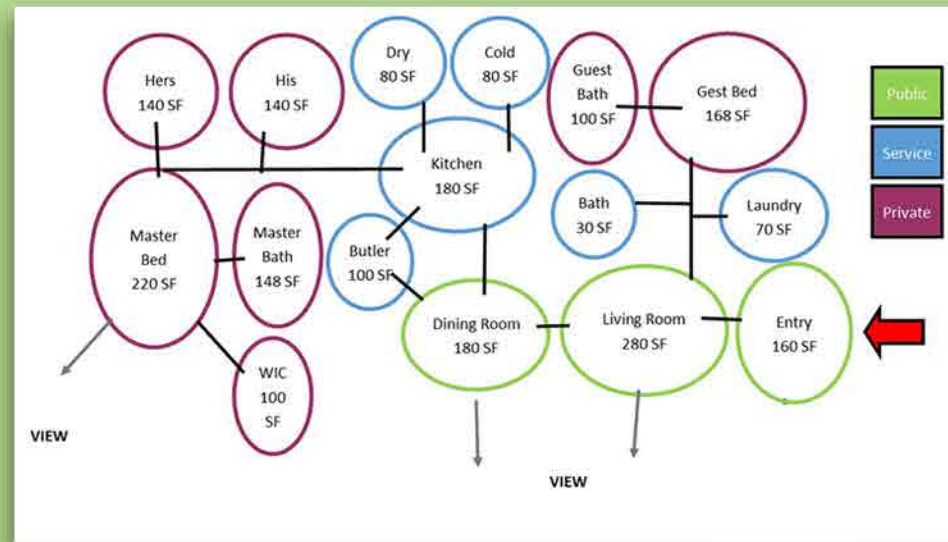
LONGITUDINAL SECTION



# SHIFT - ADA APARTMENT

## ADA APARTMENT INTEGRATION

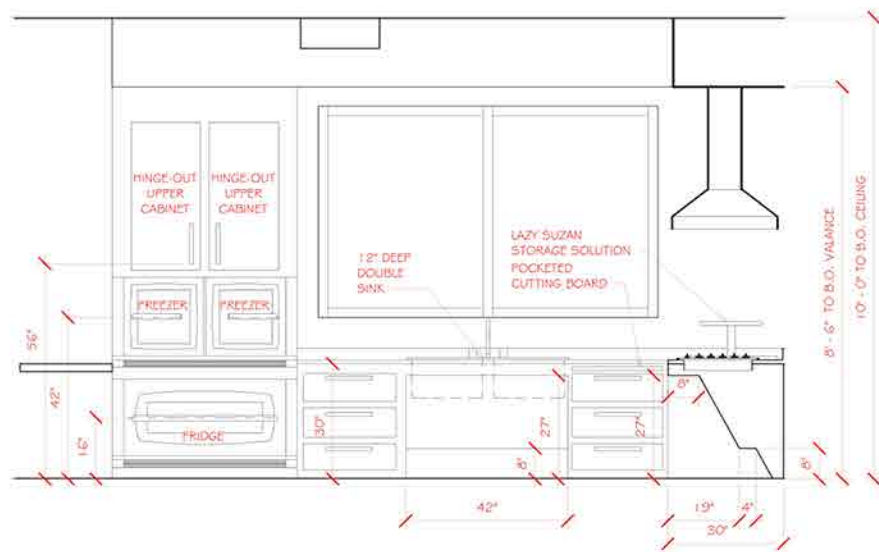
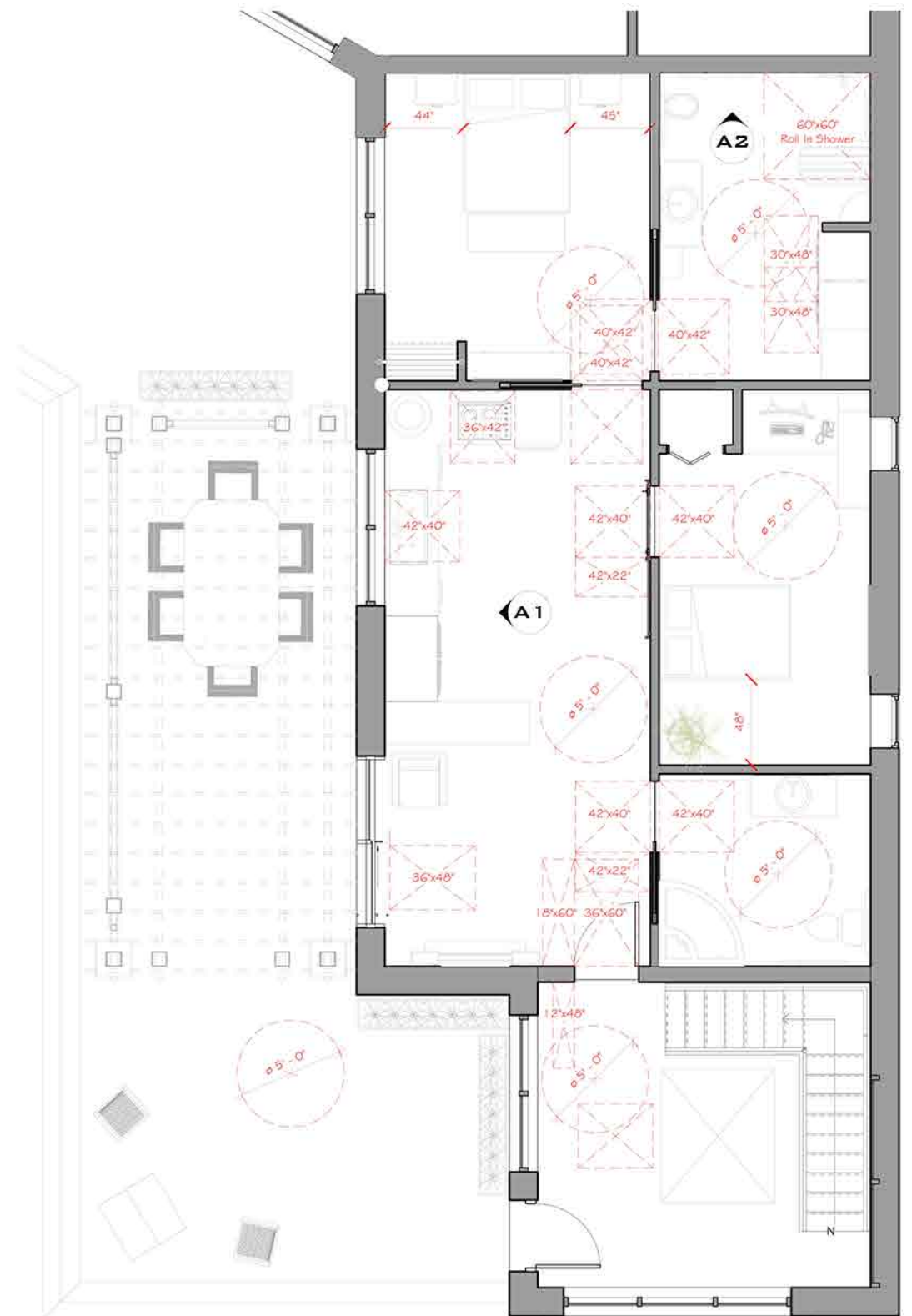
PENNSYLVANIA COLLEGE OF TECHNOLOGY  
 AGH-261/ 2 WEEK PROJECT  
 PROFESSOR DANIEL BROOKS  
 AUTODESK REVIT & TWINMOTION



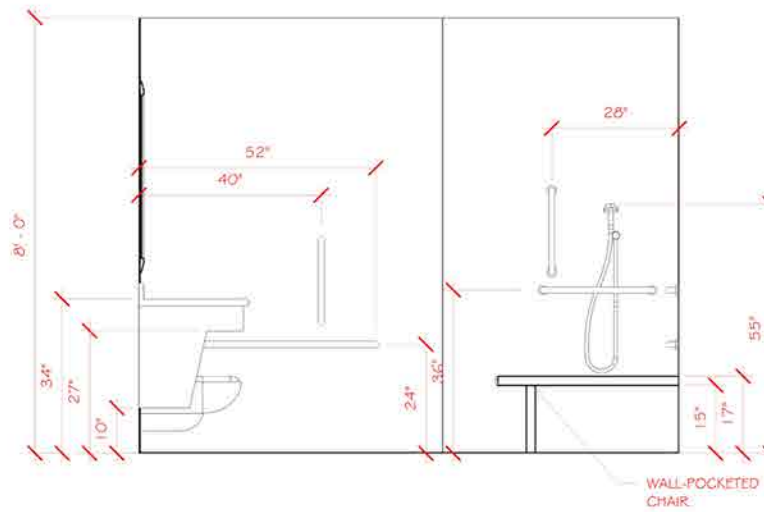
## PROJECT DESCRIPTION

A CONTINUATION ON THE MIXED-USE BUILDING INVOLVED AN INDIVIDUAL DESIGN GEARED TOWARDS A WHEELCHAIR BOUND VETERAN INHABITING ONE OF THE TWO APARTMENTS. WE WERE EACH TASKED WITH CREATING OUR OWN LAYOUT FOR THE SPACE, AS WELL AS SHOWCASING KEY ELEMENTS MADE TO ACCOMMODATE FOR THE INHABITANT.

## ADA CLEARSPACE PLAN



A1 - KITCHEN DETAIL



A2 - BATHROOM DETAIL



# RENDERED FLOOR PLAN & VIEWS



LIVING ROOM



KITCHEN

## DESIGN APPROACH

ONE OF MY MAIN GOALS FOR THIS DESIGN WAS TO PROVIDE DAYLIGHTING FOR EACH LIVING SPACES. I ALIGNED EACH SPACE TO BORDER THE PATIO TO DO SO. I WANTED TO FOCUS ON THE EXTERIOR SPACE CREATED BY THE FORM AND OPTED TO DESIGN A WOODEN VERANDA THAT ACTED AS A PRIVACY SCREEN.



BATHROOM



COVERED VERANDA

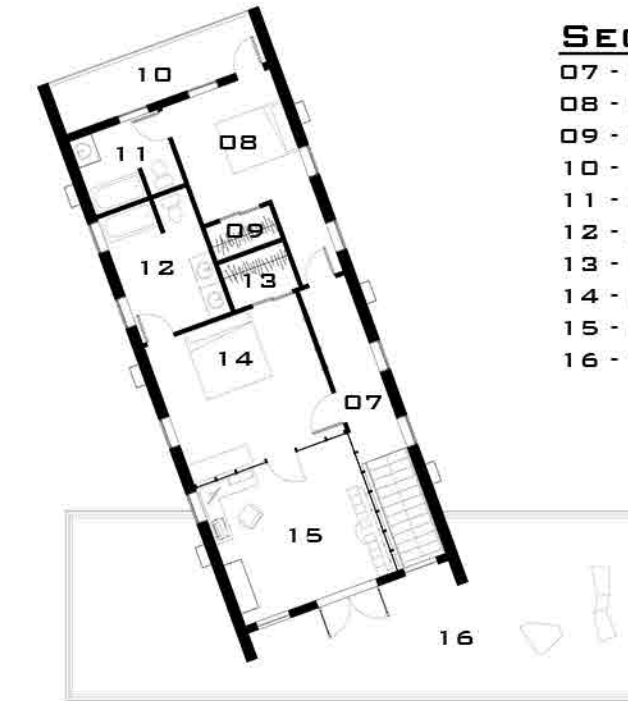






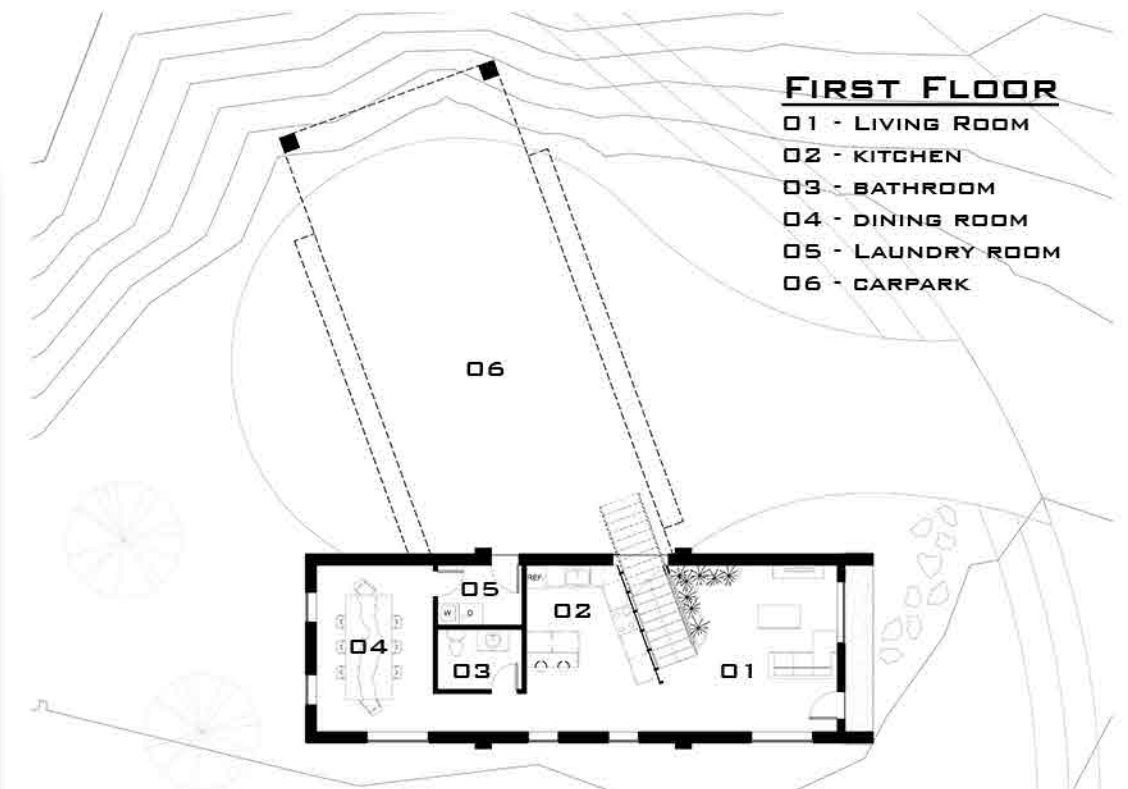
## WOODLAND ROOTS RESIDENCE

PENNSYLVANIA COLLEGE OF TECHNOLOGY  
 BSD-332/ 2 WEEK PROJECT  
 PROFESSOR NAIM JABBOUR  
 AUTODESK REVIT, TWINMOTION, & BEOPT



## SECOND FLOOR

- 07 - HALLWAY
- 08 - GUEST BEDROOM
- 09 - CLOSET
- 10 - BALCONY
- 11 - GUEST BATHROOM
- 12 - MASTER BATHROOM
- 13 - CLOSET
- 14 - MASTER BEDROOM
- 15 - OFFICE
- 16 - TERRACE



## FIRST FLOOR

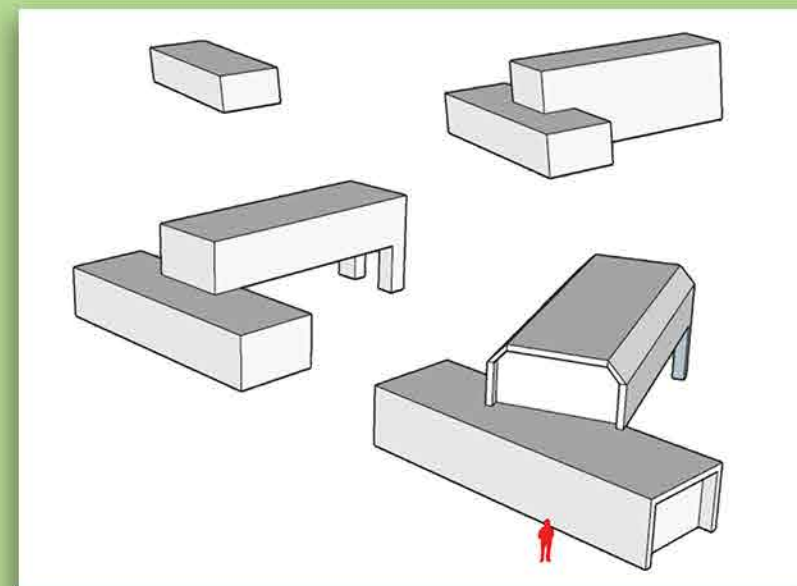
- 01 - LIVING ROOM
- 02 - KITCHEN
- 03 - BATHROOM
- 04 - DINING ROOM
- 05 - LAUNDRY ROOM
- 06 - CARPARK

### PROJECT DESCRIPTION

I WAS TASKED WITH CREATING A FAMILY RESIDENCE TO REDEFINE THE EXPECTATIONS OF SUBURBIA. AN EMPHASIS ON SUSTAINABLE DESIGN WAS ALSO TO BE FOLLOWED.

### DESIGN APPROACH

I TRIED TO EMULATE THE FORMS OF A FALLEN TREE, DRAWING INSPIRATION FROM THE GROVE THAT THE SITE WAS SITUATED ON.





## PRESENTATION MODEL

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EASTERN APPROACH



NORTHERN APPROACH



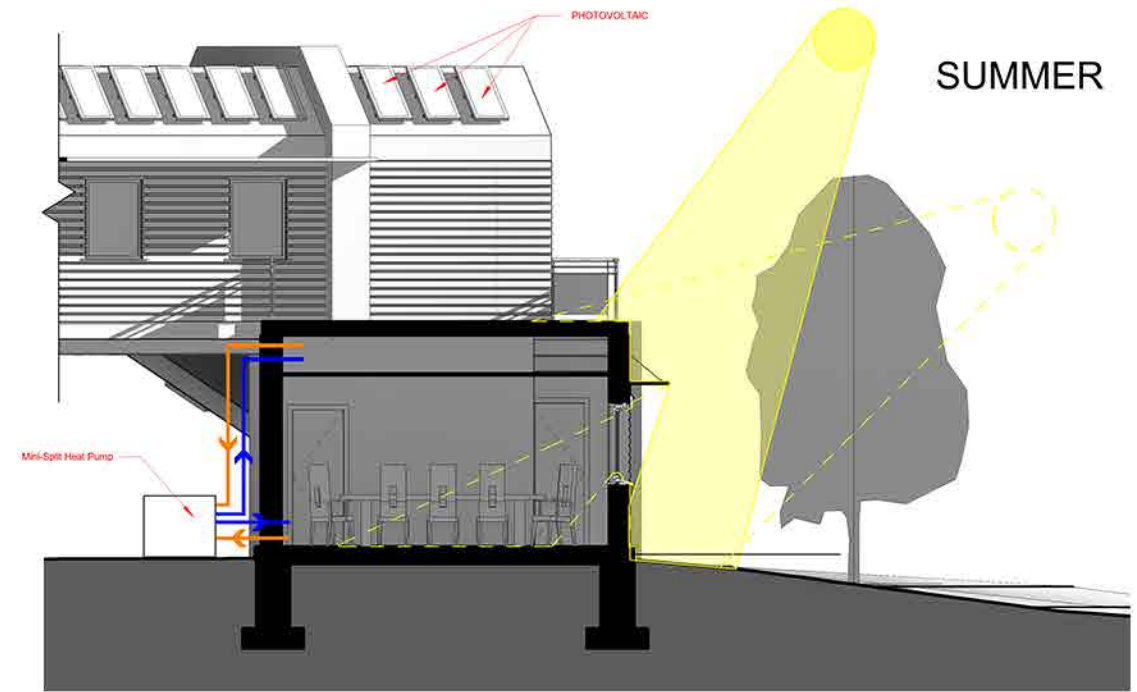
WESTERN APPROACH



# RENDERINGS



FRONT APPROACH



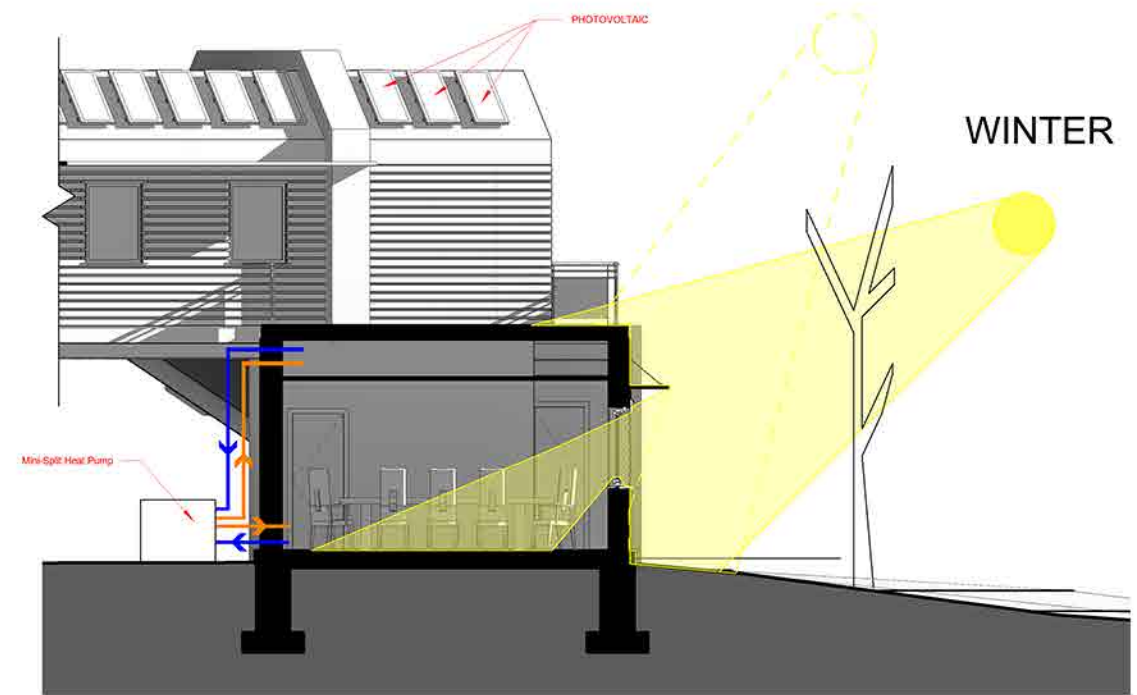
SUMMER SHADING DIAGRAM



LIVING ROOM



MASTER BEDROOM



WINTER SHADING DIAGRAM



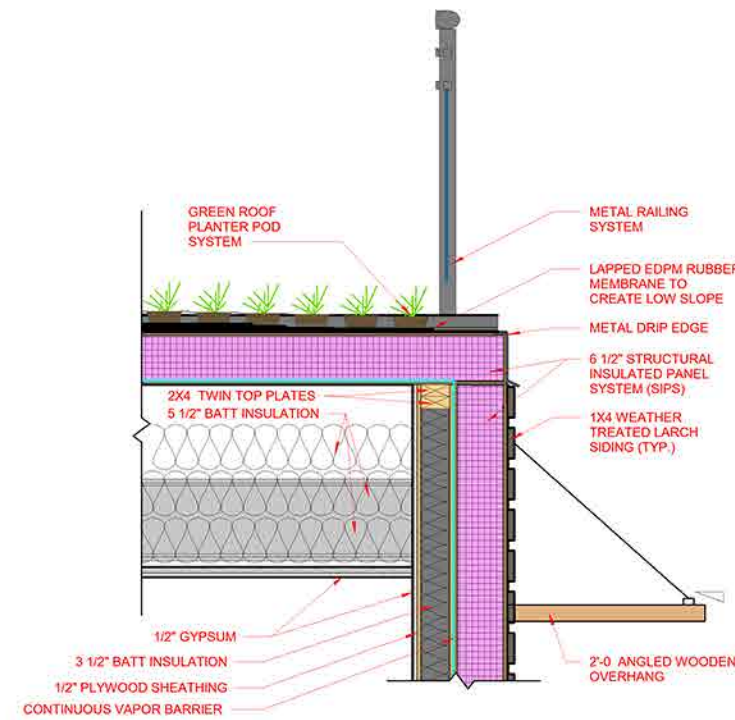
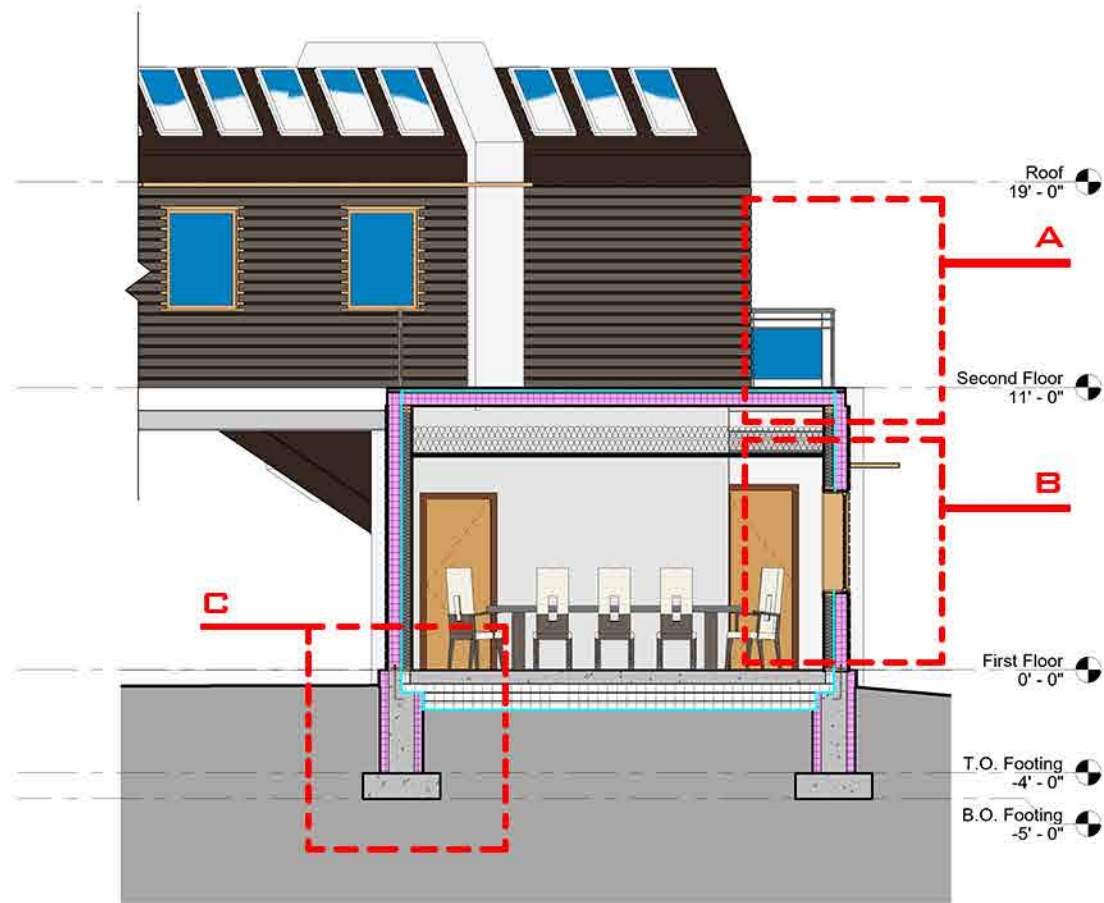
KITCHEN



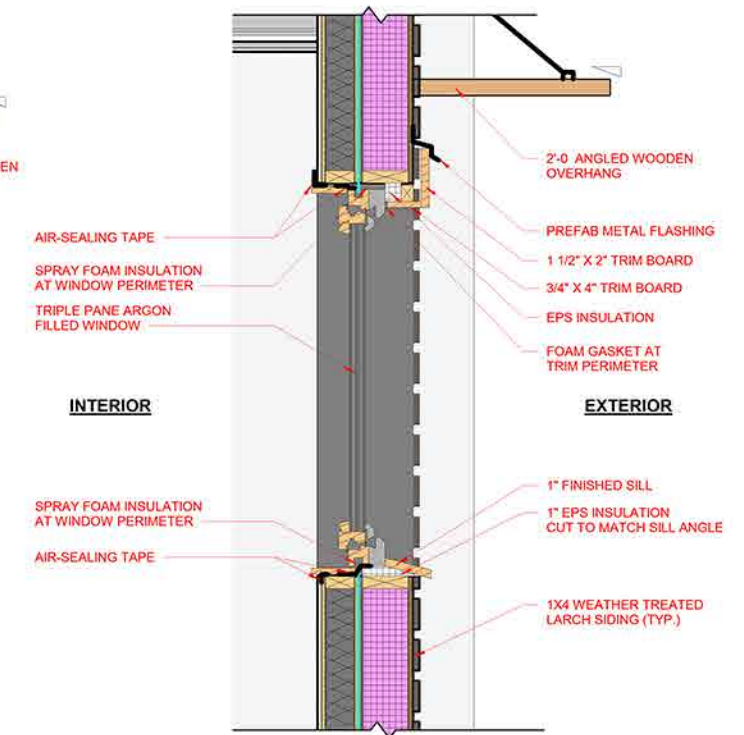
ROOFTOP TERRACE



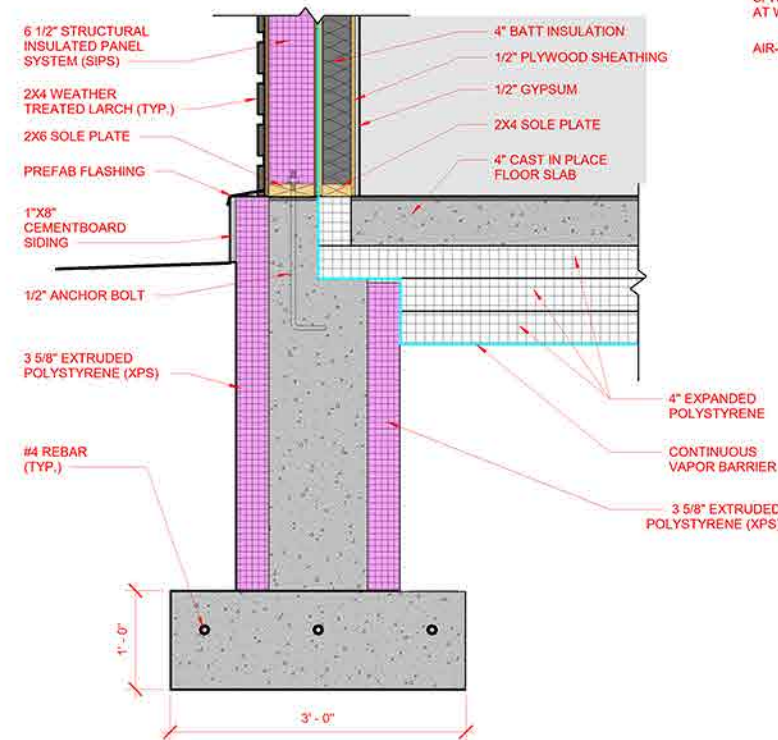
# SUSTAINABLE DETAILS



**A - Low Slope Roof Detail**

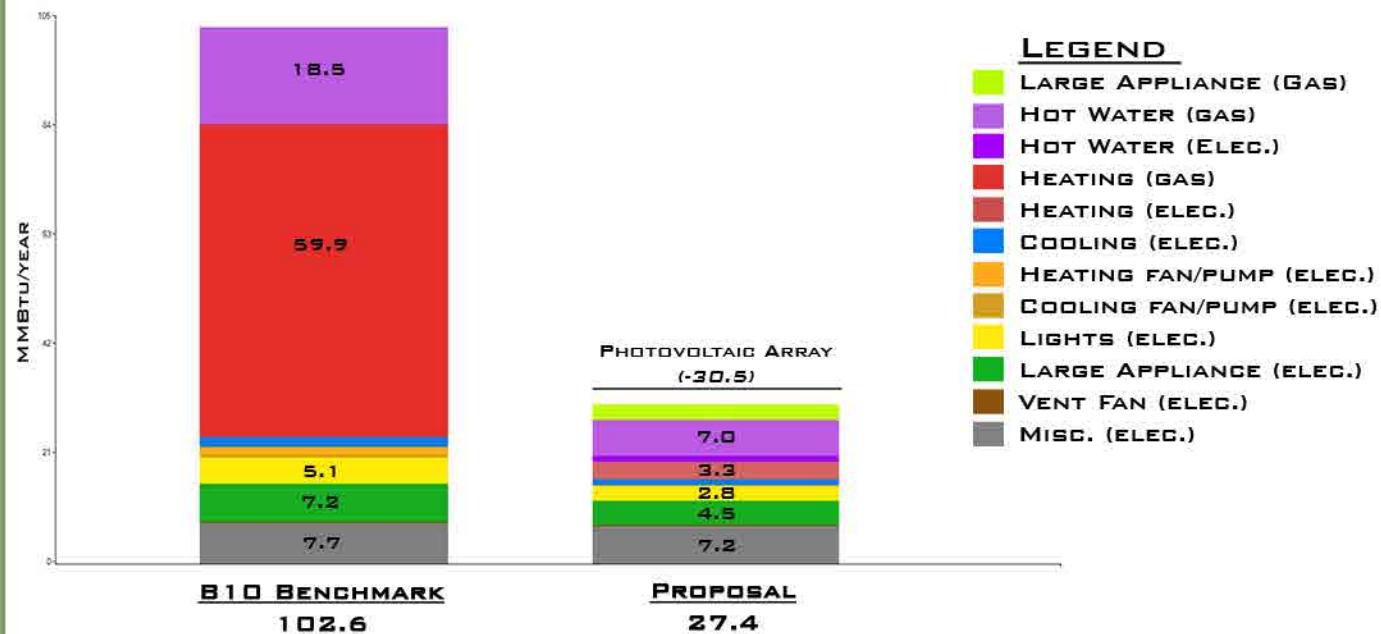


**B - Wall System Detail**



**C - Strip Footing Detail**

## ENERGY USE VS. BENCHMARK



### APPROACH TO SUSTAINABILITY

MAIN SUSTAINABLE FEATURES INCLUDE A PHOTOVOLTAIC PANEL ARRAY, STRUCTURAL INSULATED PANEL SYSTEM, GREEN ROOF, MINI-SPLIT HEAT PUMP, RECYCLED WOODEN FACADE, AND EXTERIOR SHADING DEVICES. COLLECTIVELY, THE BUILDING IS PREDICTED TO HAVE NET-POSITIVE ENERGY USE.



# ADAPT



EXISTING FACADE

## WILLIAMSPORT BREWHOUSE REDEVELOPMENT

PENNSYLVANIA COLLEGE OF TECHNOLOGY

BSD-352/ 4 WEEK PROJECT

PROFESSOR GEOFF CAMPBELL & ROBERT WOZNIAK

AUTODESK REVIT, PHOTOSHOP, TWINMOTION, & DESIGNBUILDER

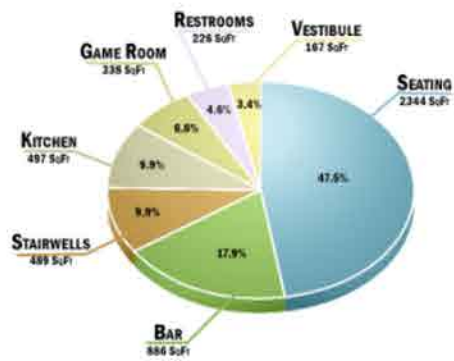
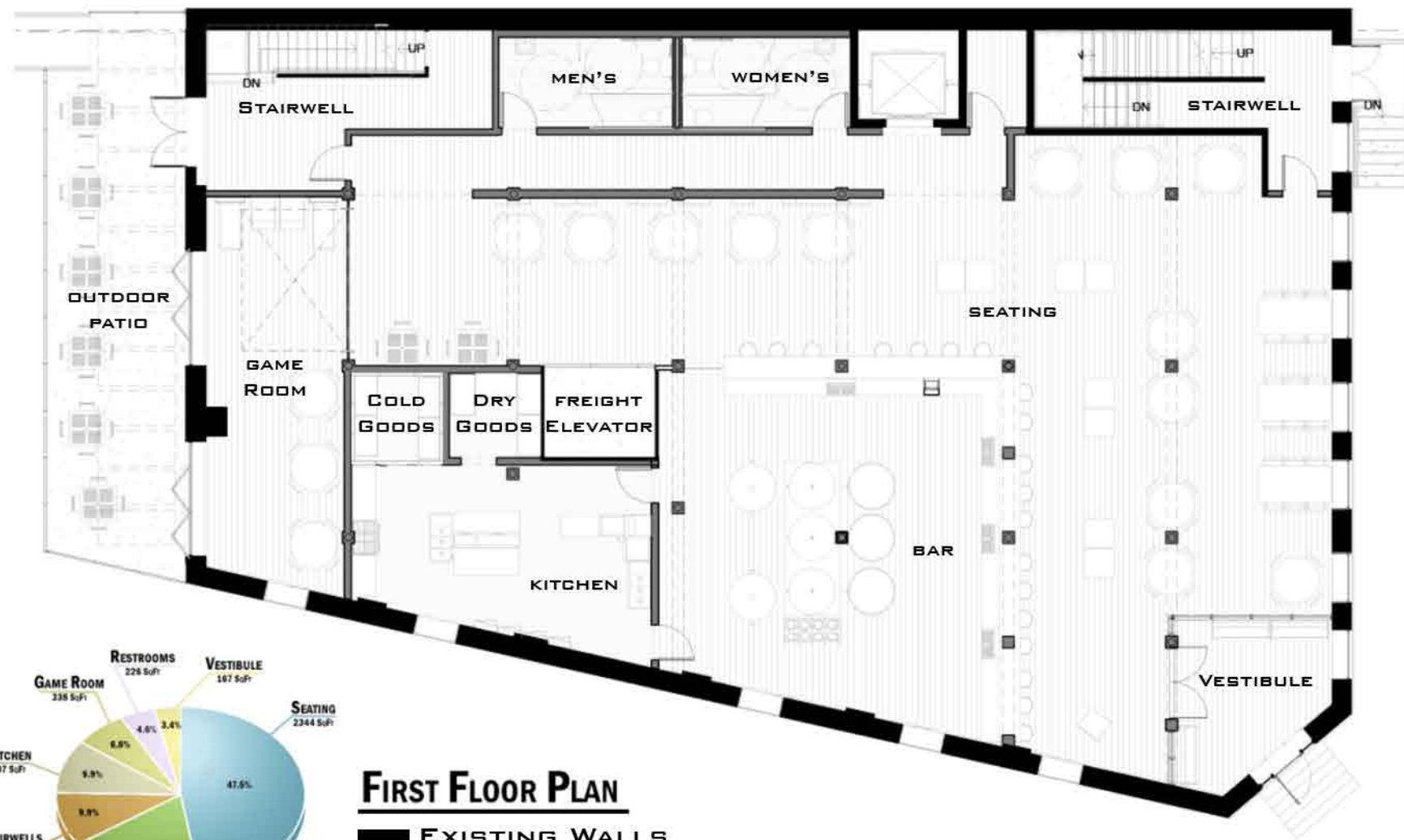
### *PROJECT DESCRIPTION*

THE BRIEF CALLED FOR AN EXISTING STRUCTURE TO BE REPROPOSED THAT ONCE FUNCTIONED AS A STOREHOUSE FOR A GROCER. WE WERE ABLE TO TOUR THE BUILDING AND MEET WITH THE CLIENT, WHO FURTHER SHOWED INTEREST IN RESERVING THE FOURTH FLOOR AS AN EVENT SPACE, AS WELL AS INTRODUCING A BAR OR BREWERY ON THE FIRST FLOOR.



EXISTING SECOND FLOOR





**FIRST FLOOR PLAN**  
 ■ EXISTING WALLS  
 ■ NEW WALLS



VIEW OF BAR



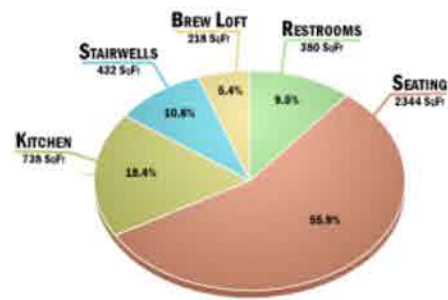
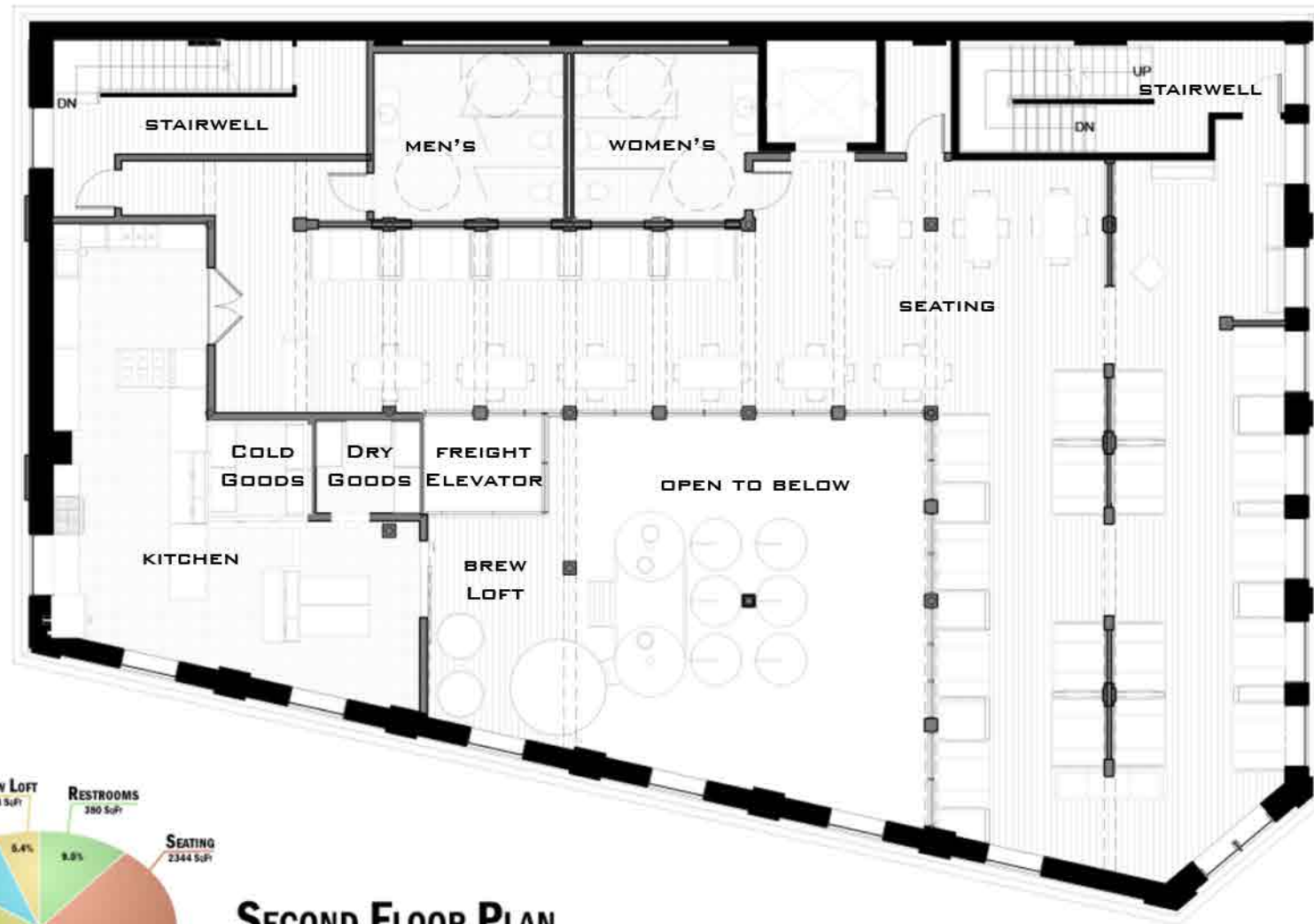
FEATURE WALL & LIGHTING

**DESIGN APPROACH**

THE GOAL THAT I WANTED TO ACHIEVE FOR THIS PROJECT WAS TO CREATE A SPACE FOR YOUNG ADULTS TO BE SOCIAL AT. I ALSO WANTED TO FOCUS ON REUSING AS MUCH AS I COULD. I TOOK ADVANTAGE OF EXISTING CONDITIONS BY REUSING EXISTING STAIRWELLS, ENTRIES, AND FREIGHT ELEVATOR. I REPURPOSED WHAT AT ONE TIME WAS A LOADING DOCK AND TURNED IT TO OUTDOOR SEATING.







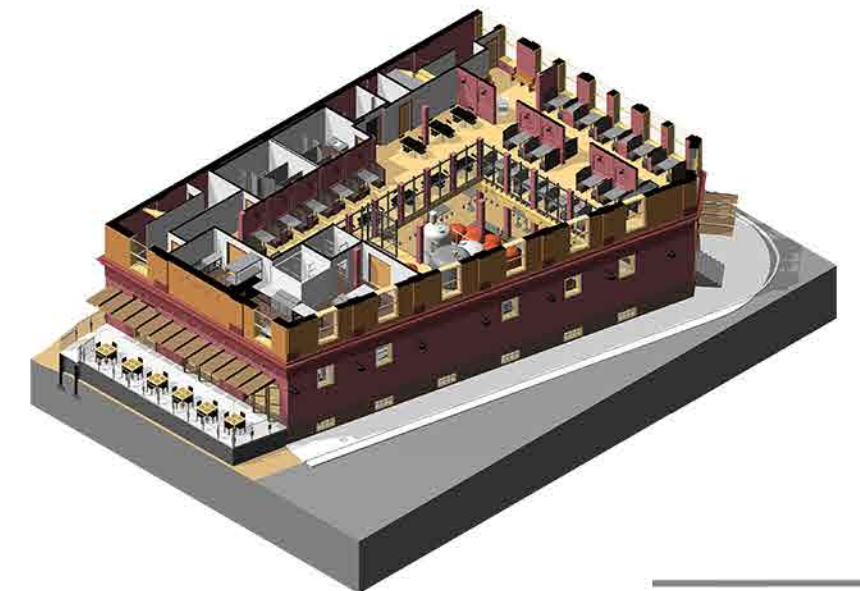
**SECOND FLOOR PLAN**  
 ■ EXISTING WALLS  
 ■ NEW WALLS



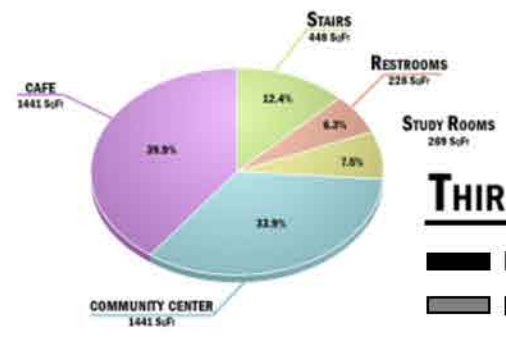
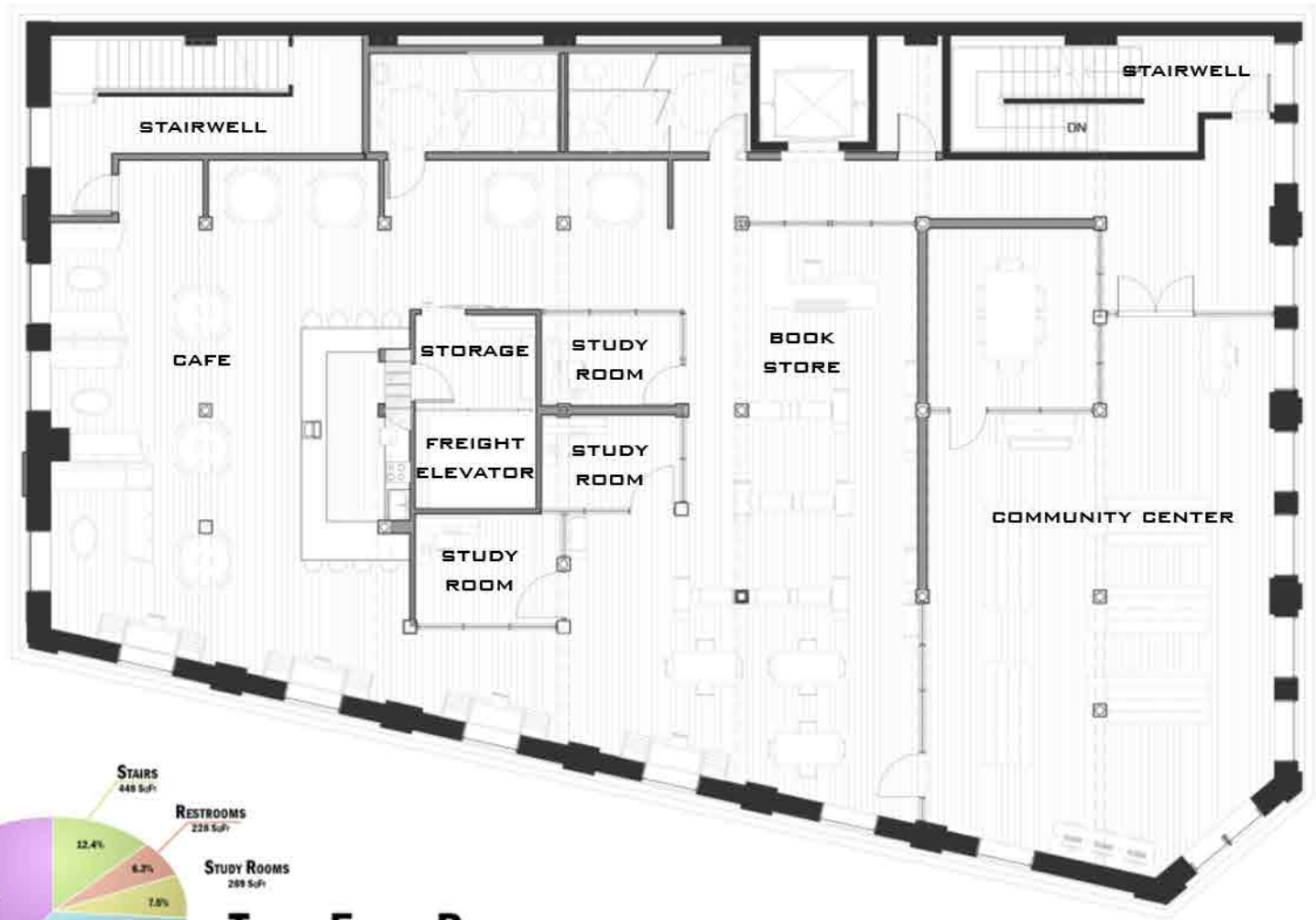
RESTAURANT



VIEW TO FIRST FLOOR







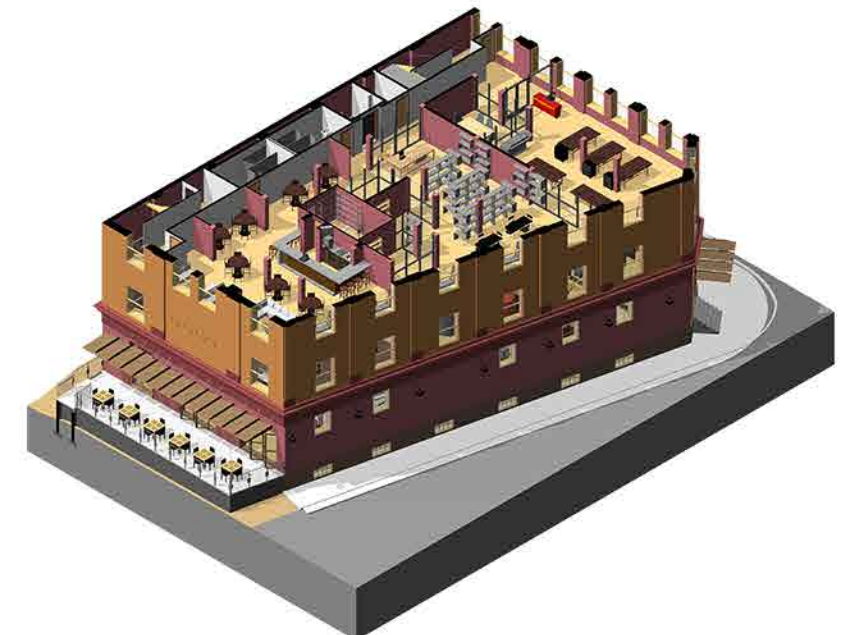
**THIRD FLOOR PLAN**  
 ■ EXISTING WALLS  
 ■ NEW WALLS



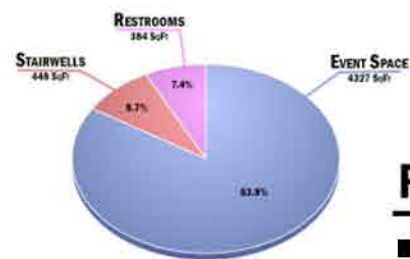
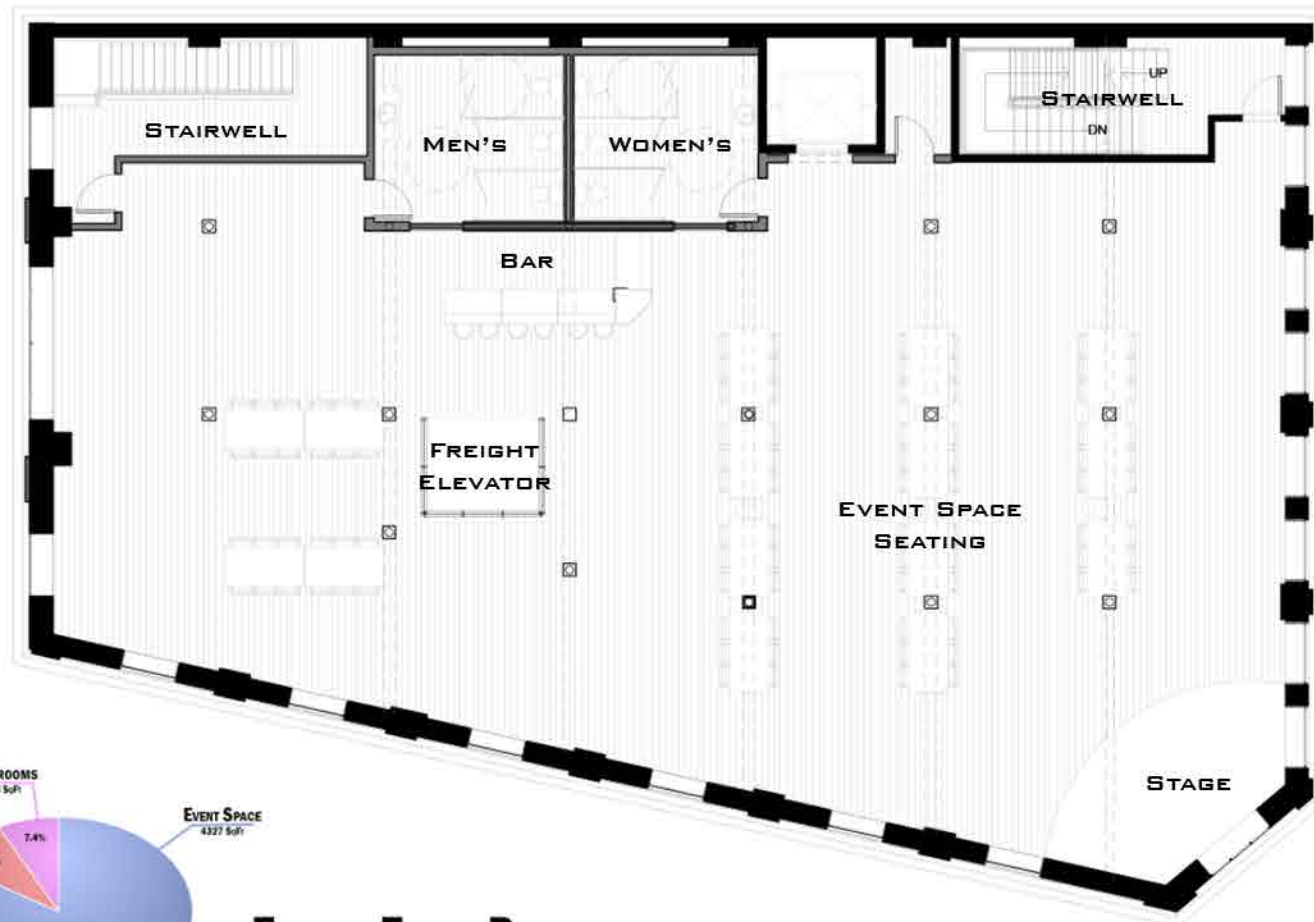
VIEW OF BOOKSTORE



VIEW OF MAKERSPACE







### FOURTH FLOOR PLAN

— EXISTING WALLS  
 — NEW WALLS



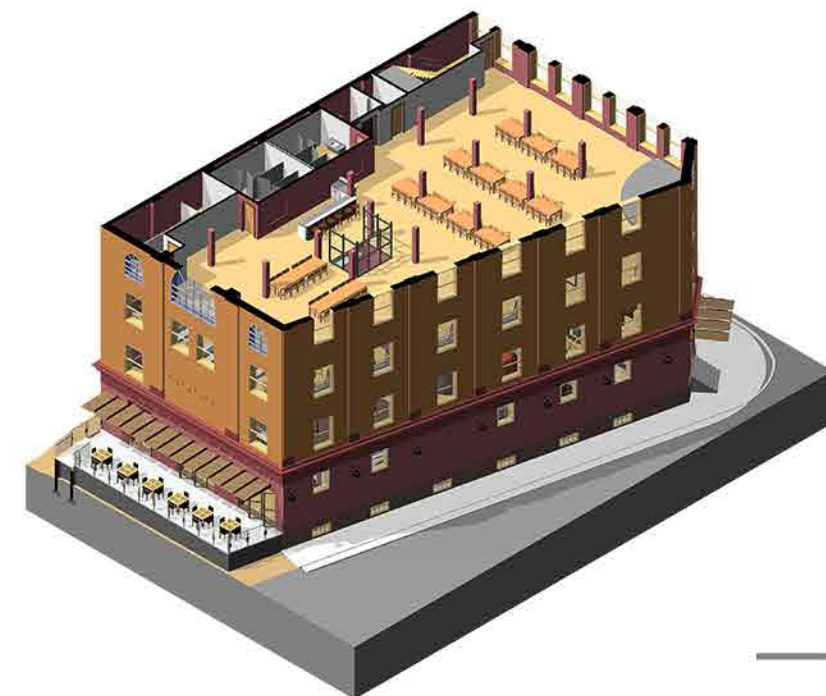
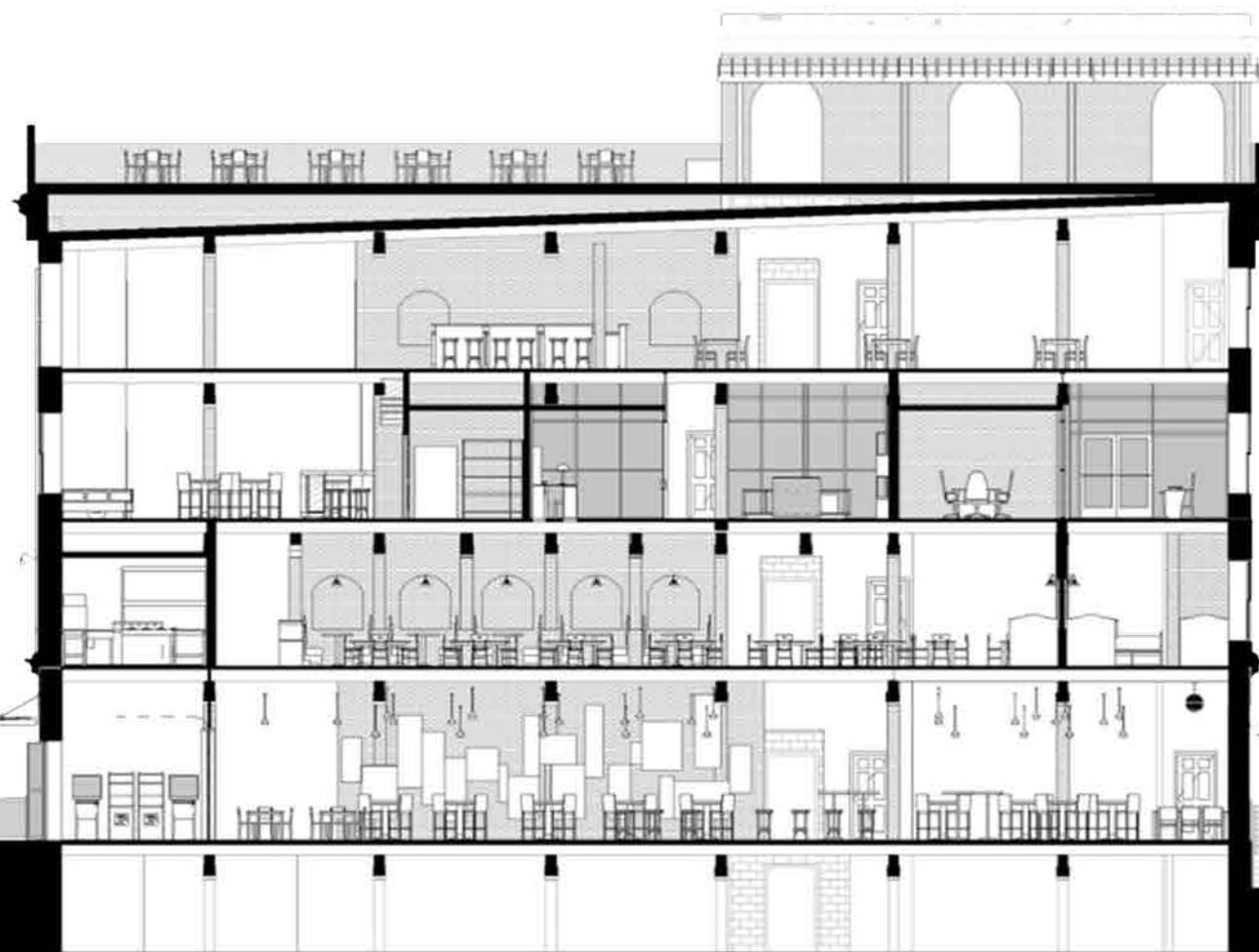
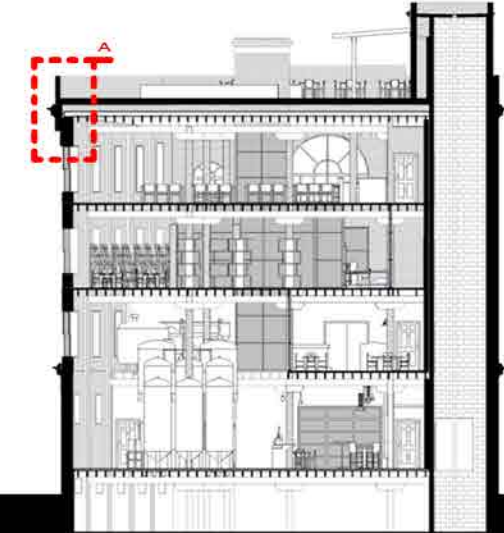
VIEW OF EVENT SPACE

SLOPED TOP OF COPING DRAIN

TERRACOTTA PROFILE  
 LBx6x7/16 STEEL ANGLE  
 SPANDREL FLASHING

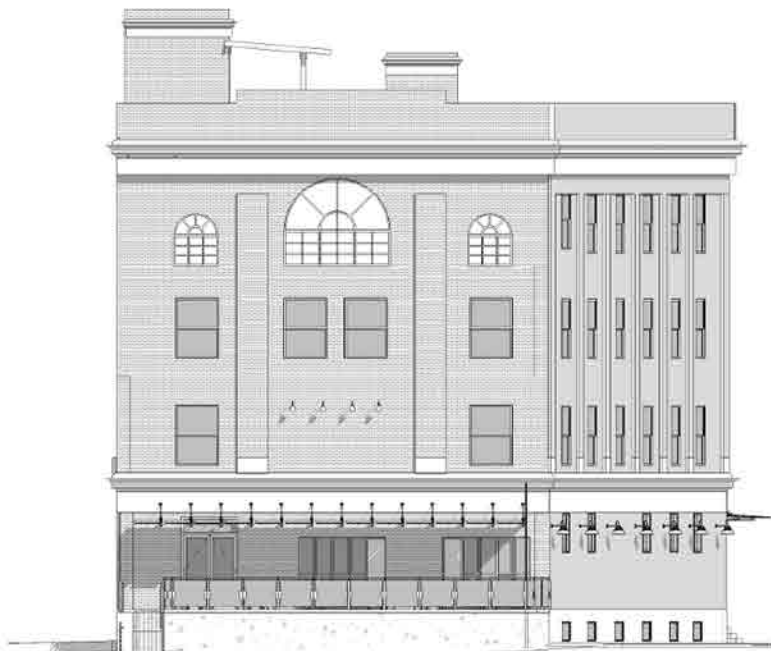
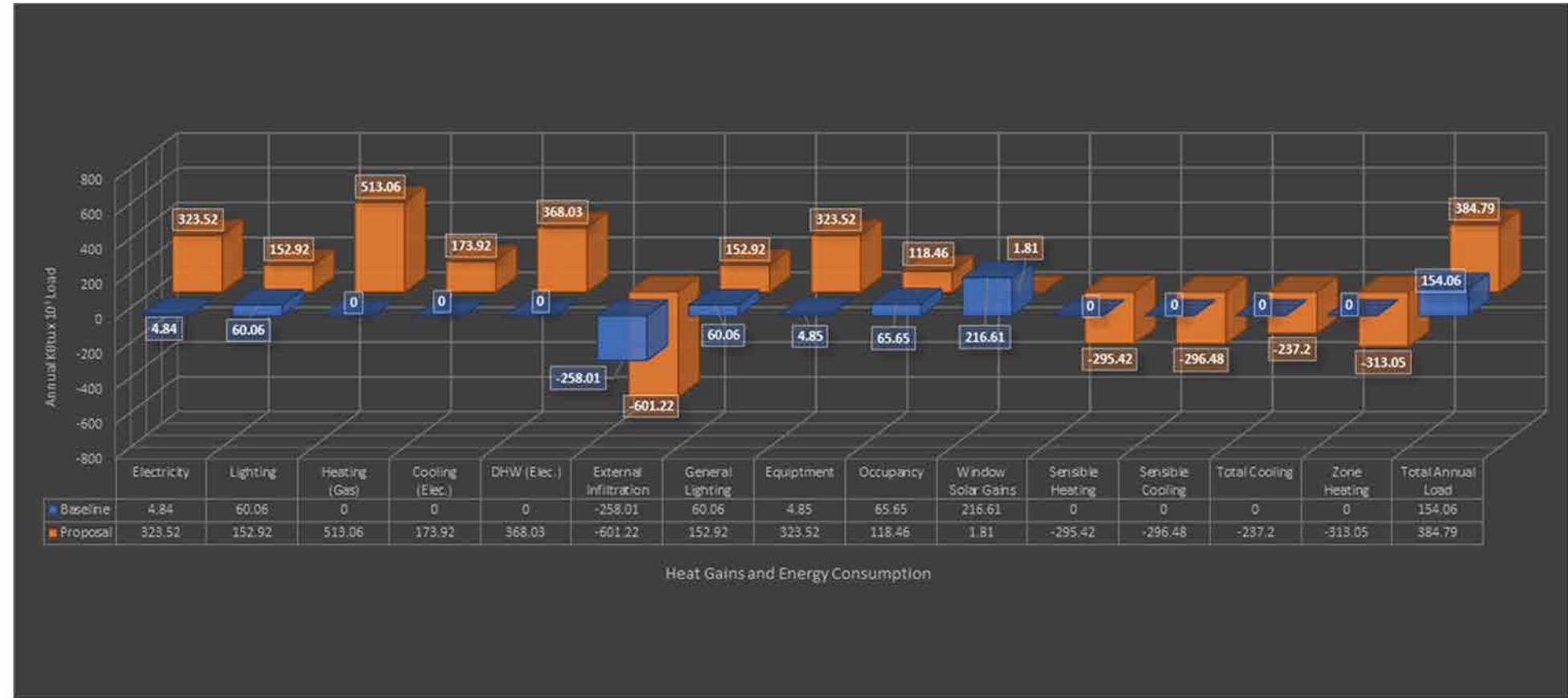
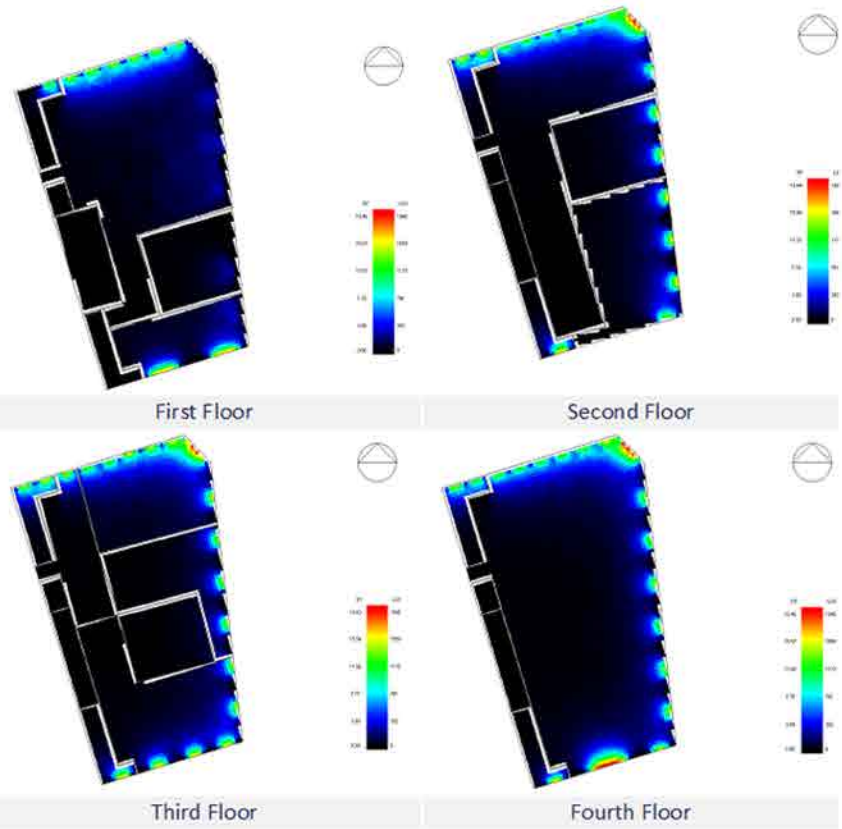
DRAINAGE SLOTS  
 EDMP MEMBRANE  
 EXISTING STRUCTURE

A - ROOFTOP DECKING DETAIL

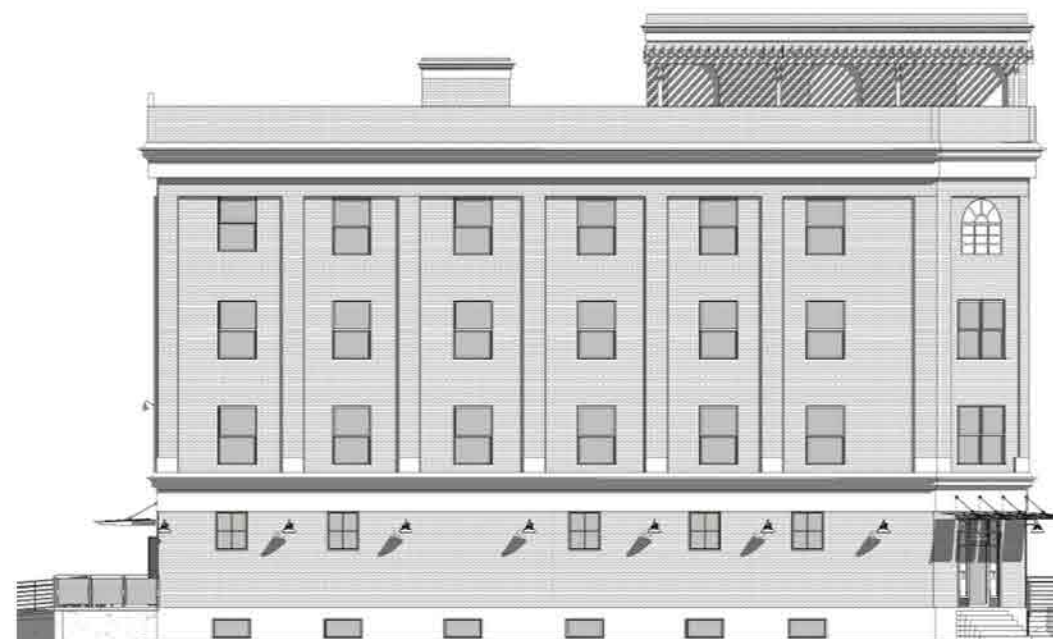




Daylighting Analysis



NORTHERN ELEVATION



WESTERN ELEVATION



SOUTHERN ELEVATION



# INTERLOCK



## SCHOOL OF ART & DESIGN

PENNSYLVANIA COLLEGE OF TECHNOLOGY

BSD-352/ 8 WEEK PROJECT

PROFESSOR GEOFF CAMPBELL & ROBERT WOZNIAK

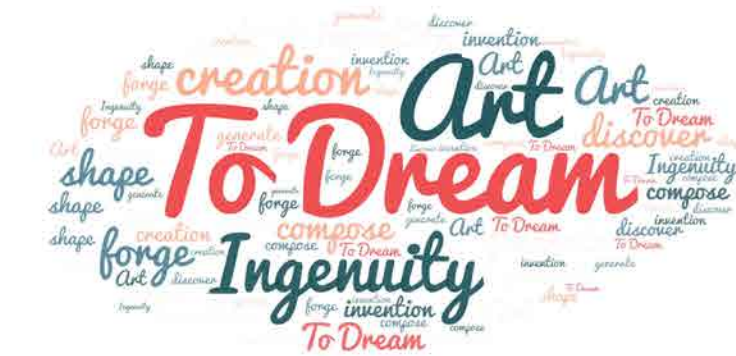
AUTODESK REVIT, PHOTOSHOP, TWINMOTION, & SKETCHUP SEFAIRA

### *PROJECT DESCRIPTION*

THE BRIEF CALLED FOR A PUBLIC HIGH SCHOOL WHICH SPECIALIZED IN ART TO BE DESIGNED IN SAN-FRANCISCO, CALIFORNIA. WITH THE SCHOOL'S SPECIALIZATION, THE PROGRAM REQUIRED A GALLERY, FASHION DESIGN ROOM, MAKERSPACE, ART ROOM, AND ARCHITECTURE STUDIO. THE BUILDING WAS SLATED TO SERVICE 7-12TH GRADE, EACH PREDICTING A LOAD OF 90 STUDENTS PER GRADE LEVEL.

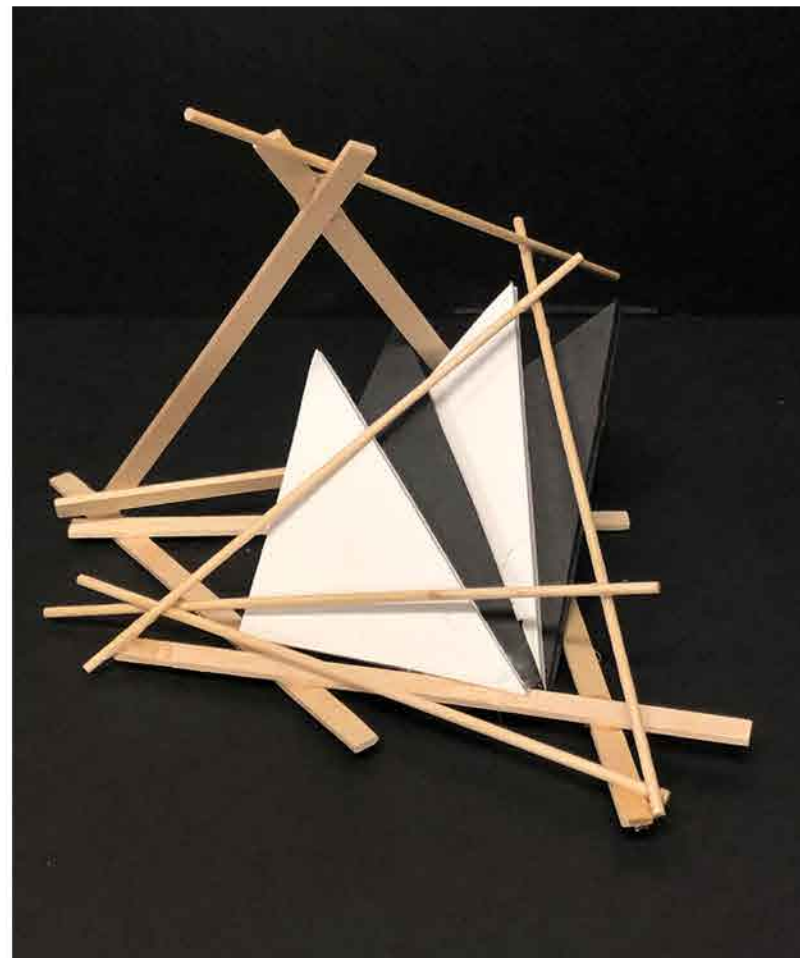
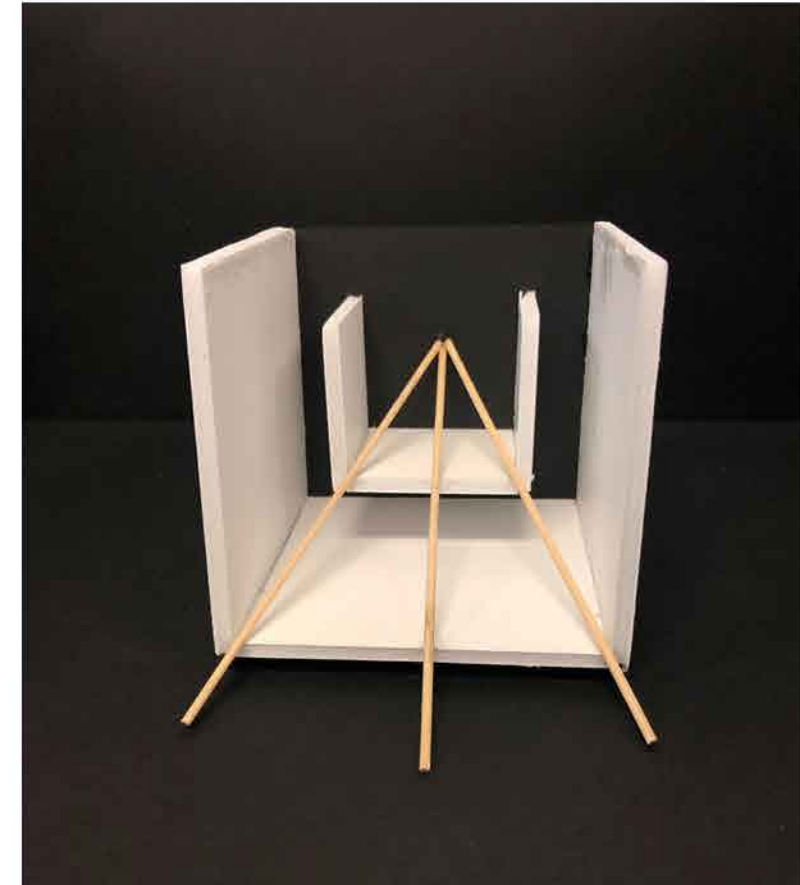






## VISUALISING CAPTIVITY

REPRESENTING THE FRAMEWORK OF WHICH IDEAS ARE CREATED WITHIN. CREATIVITY IS SEEN EXPLODING BEYOND THE ORIGINAL FRAMEWORK AS IT CASCADES AND GROWS. FOCUSES INCLUDE FRAMING OBJECTS AND SHAPES WITHIN SHAPES.



## OVERGROWTH

IN AN URBAN ENVIRONMENT NATURE TENDS TO FIND WAYS TO ENVELOPE THE BUILT ENVIRONMENT. THIS MODEL DEPICTS THIS SLANTED PLANE MADE OF THREE ELEMENTS EXPANDING INTO A VERY RECTANGULAR OBJECT. FOCUSES OF THIS OBJECT INCLUDE A SHAPE WITHIN A SHAPE AND COMPRESSION TO EXPANSION.

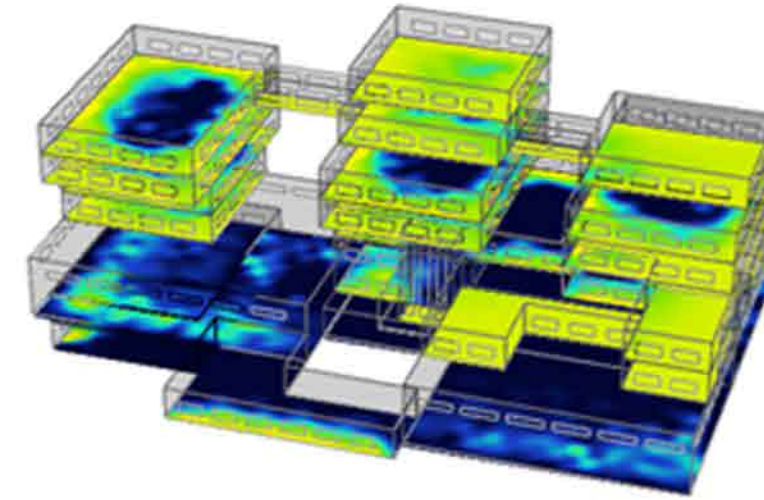
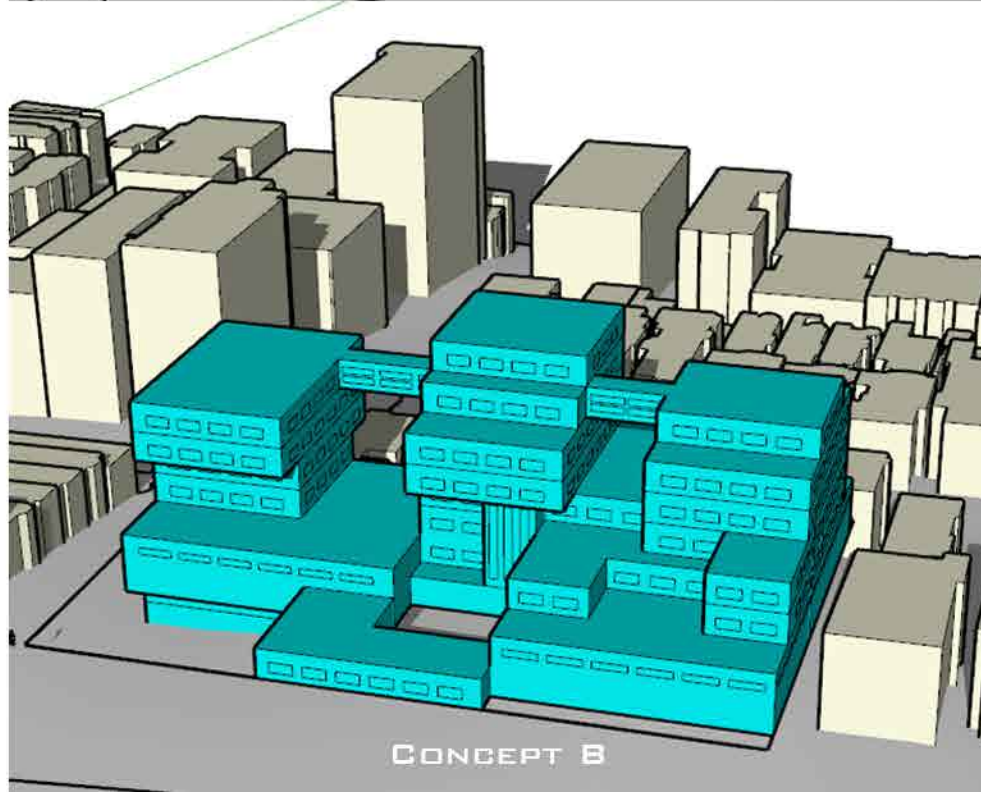
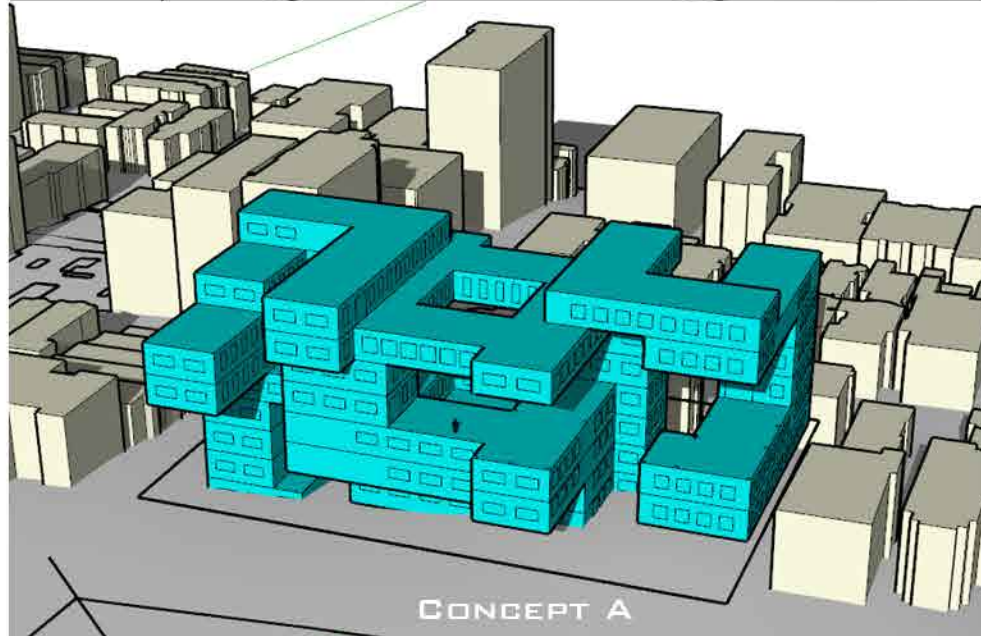


## A STUDY OF LIGHT

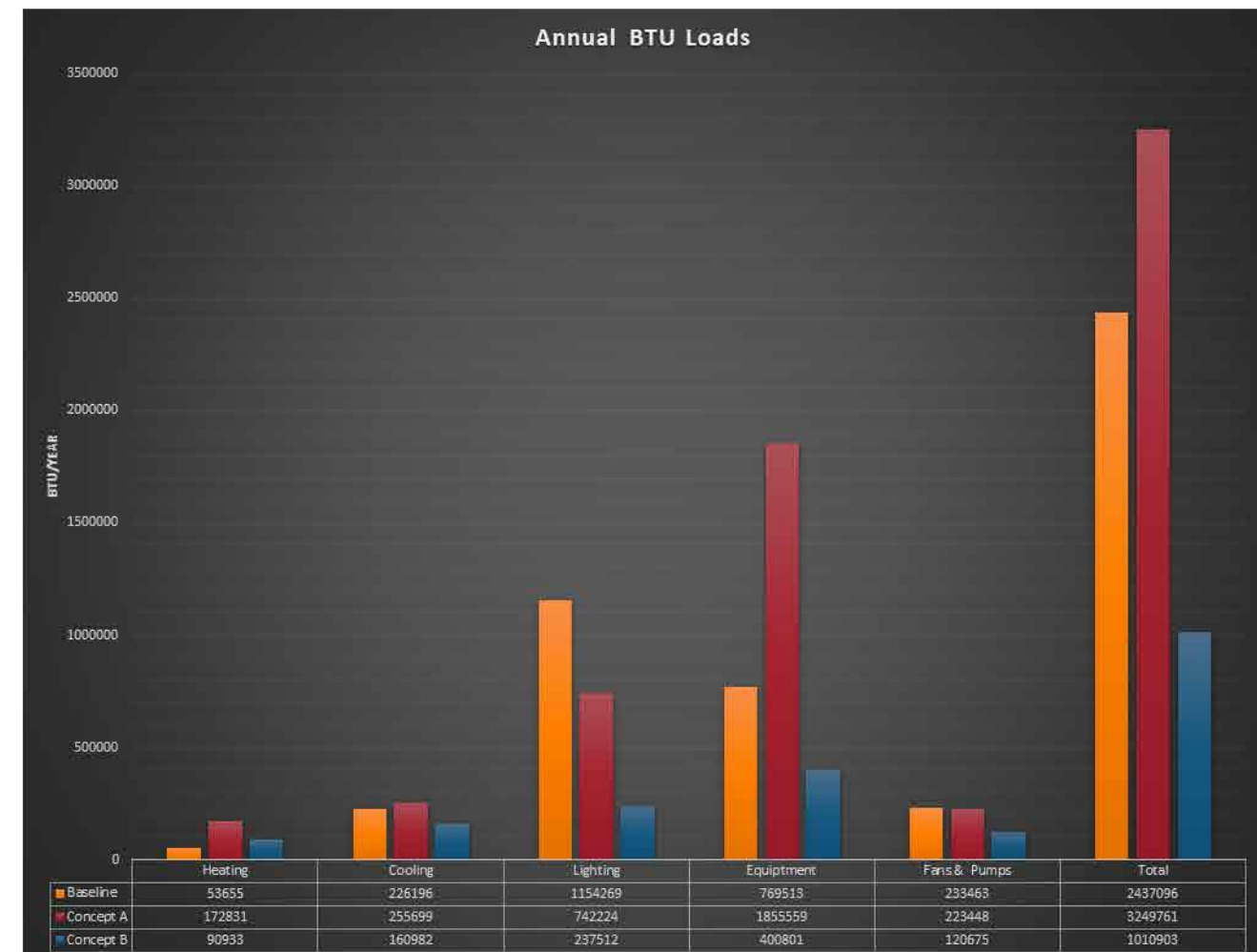
THIS CONCEPT STEMS FROM THE LEARNING PROCESS. IN AN ACADEMIC ENVIRONMENT, STUDENTS ARE EXPOSED TO EXISTING WORK AND DRAW CONCLUSIONS FROM THE WORLD AROUND THEM. FOCUSES ON MATERIALITY AND DEMI-TRANSPARENCY.



# ENERGY BENCHMARKING



PERCENTAGE OF OCCUPIED HOURS WHERE ILLUMINANCE IS AT LEAST 37 FOOT-CANDLES, MEASURED AT 2' - 10" ABOVE THE FLOOR PLATE.



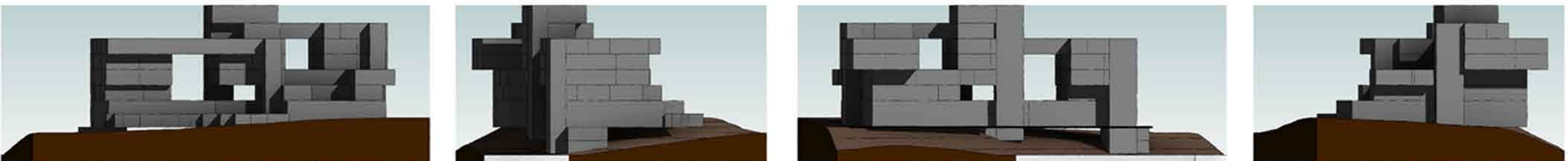
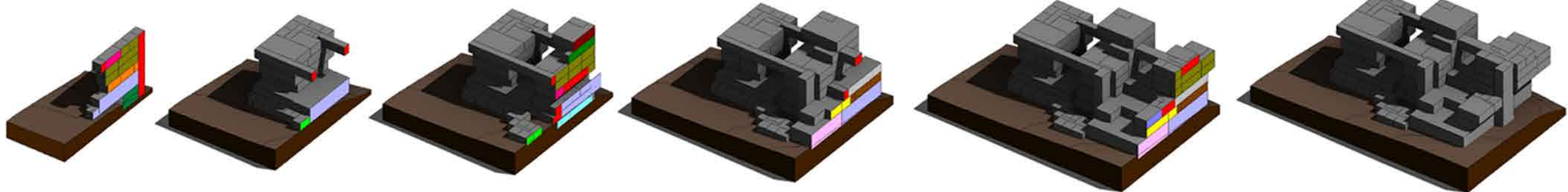
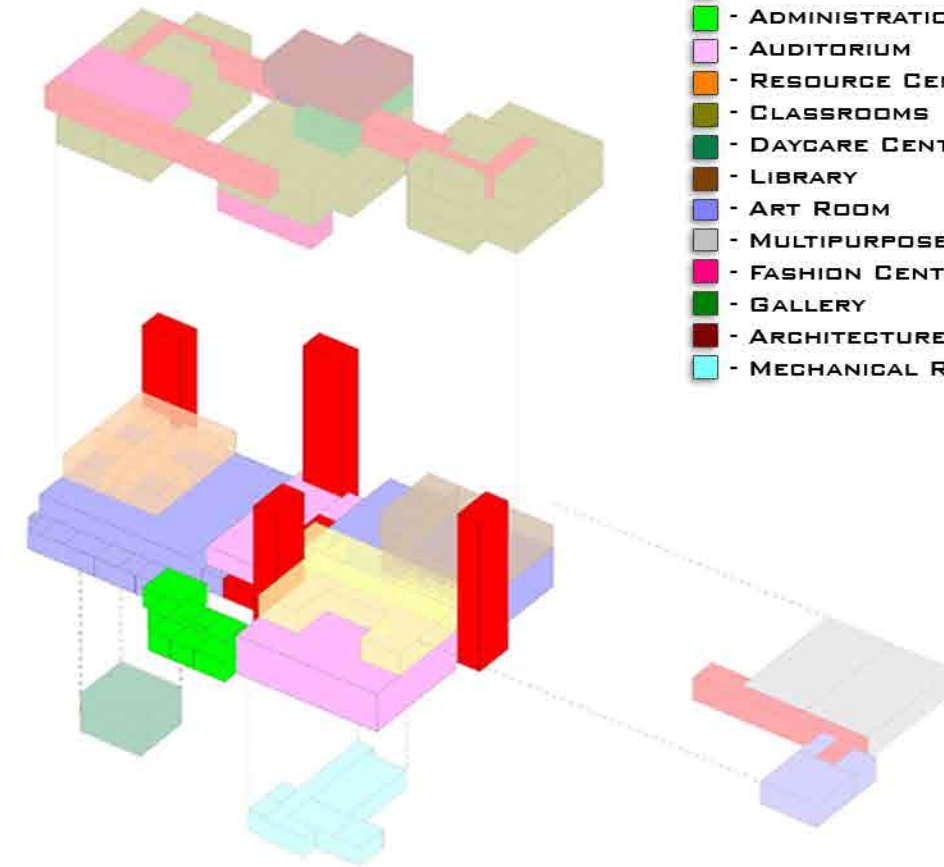
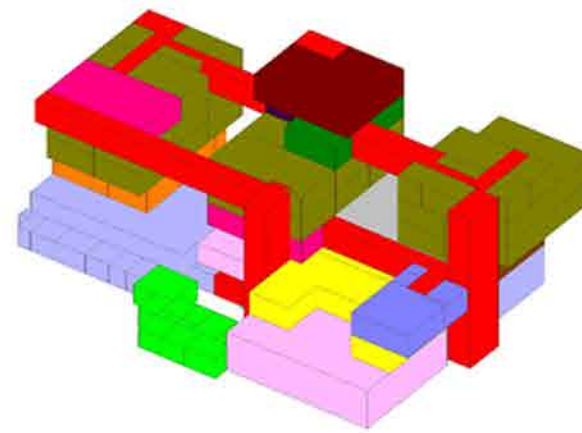
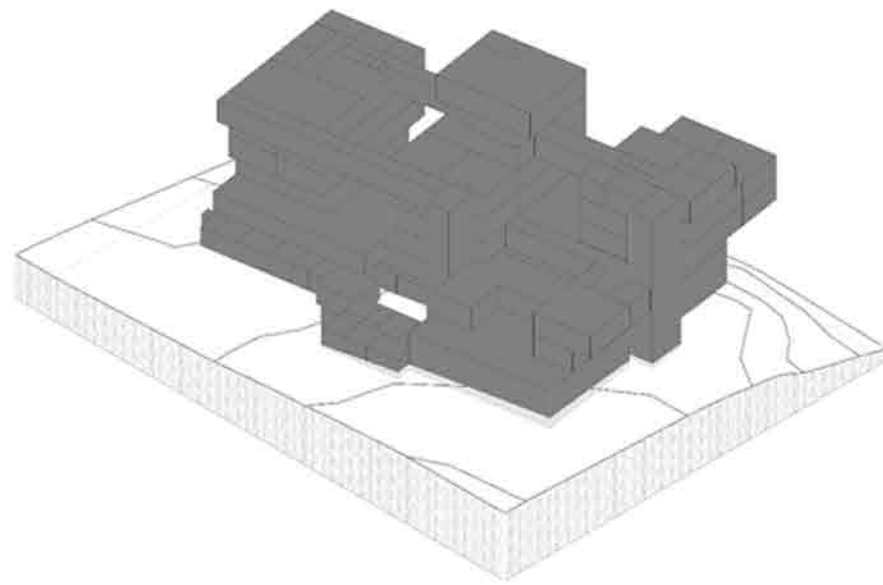


# STACK DIAGRAM

## DESIGN APPROACH

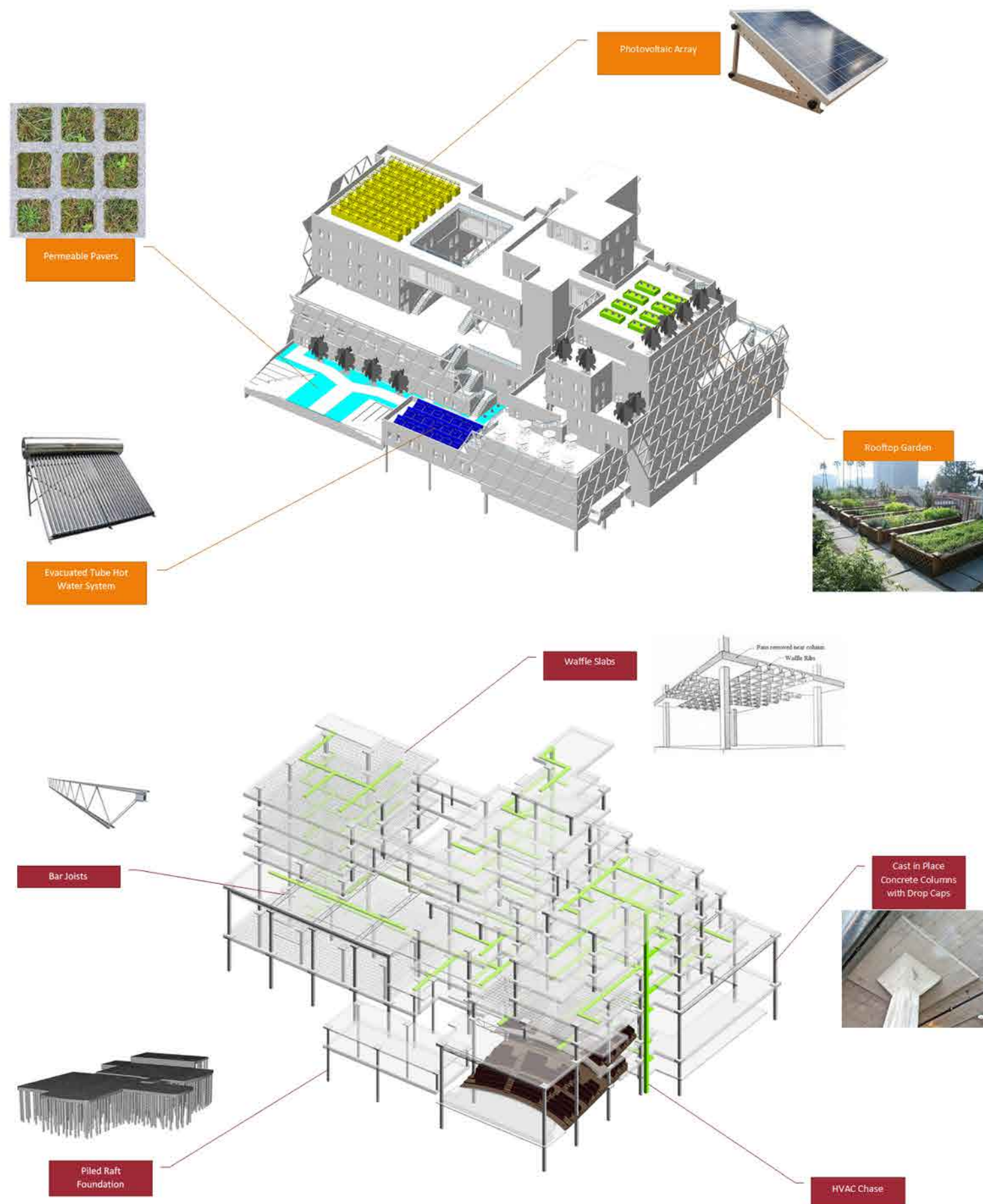
AFTER GENERATING A FEW CONCEPT MODELS, I TRIED TO RECREATE THE SAME EMOTIONS THAT I FELT WHEN OBSERVING THEM INTO A BUILDING FORM. UTILIZING THE DIFFERENCES IN USE GROUPS, I STACKED VARIOUS BLOCKS AND BRIDGED CONNECTIONS BETWEEN THEM. THE CLIMATE OF THE REGION IS SUITABLE FOR EXTERIOR CIRCULATION. I ALSO KNEW THAT I WANTED TO ENCASE THE STRUCTURE WITH A DIAGRID SYSTEM TO HELP IN THE EVENT OF AN EARTHQUAKE.

- CIRCULATION
- ATHLETICS
- ADMINISTRATION
- AUDITORIUM
- RESOURCE CENTER
- CLASSROOMS
- DAYCARE CENTER
- LIBRARY
- ART ROOM
- MULTIPURPOSE ROOM
- FASHION CENTER
- GALLERY
- ARCHITECTURE STUDIO
- MECHANICAL ROOMS





# SYSTEMS DIAGRAM



## APPROACH TO SUSTAINABILITY

BUILDING SYSTEMS THAT HAVE A POSITIVE IMPACT ON THE BUILDINGS ENERGY LOAD INCLUDE:

- SOLAR HOT WATER SYSTEM FOR THE POOL
- PHOTOVOLTAIC PANEL SYSTEM
- LOW E WINDOWS
- ROOFTOP GARDEN

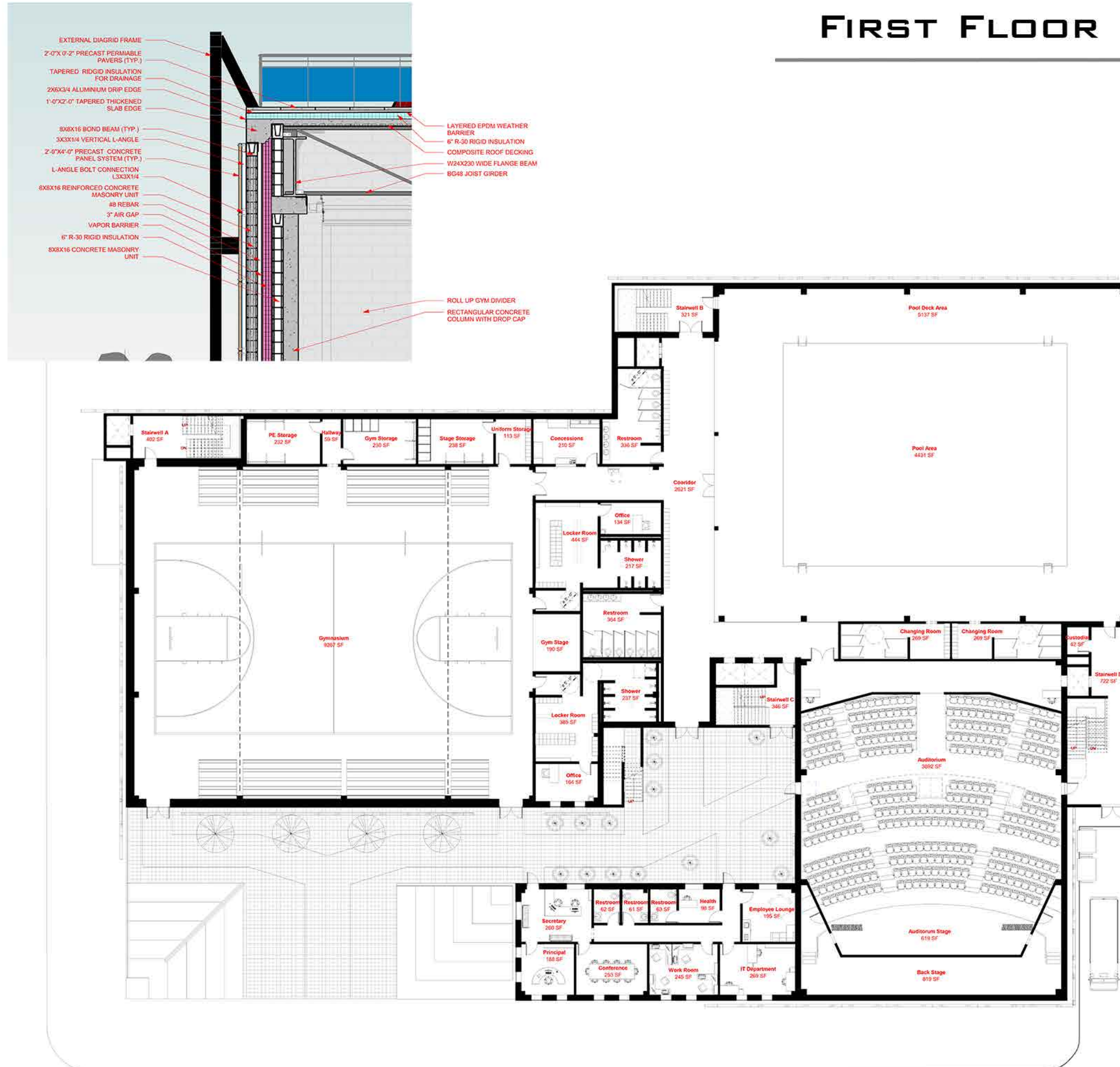
## APPROACH TO STRUCTURE

THE STRUCTURAL SYSTEMS OF THE BUILDING INCLUDE:

- CAST IN PLACE COLUMNS
- WAFFLE SLABS
- PILED RAFT FOUNDATIONS
- BAR JOIST
- DIAGRID EXTERIOR FRAME

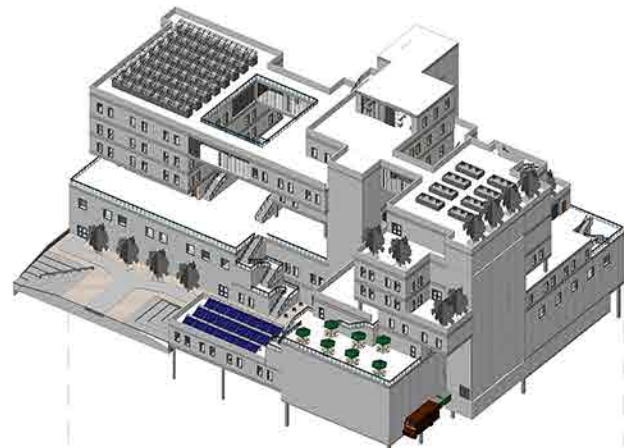


# FIRST FLOOR PLAN

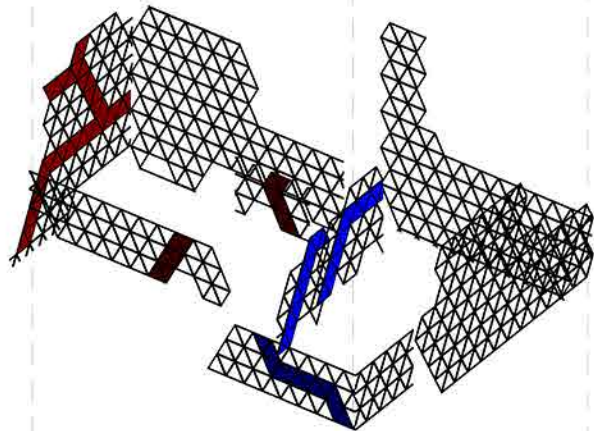




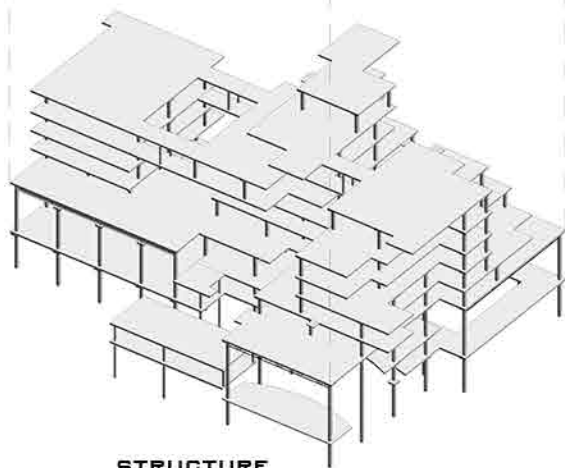
# THIRD FLOOR PLAN



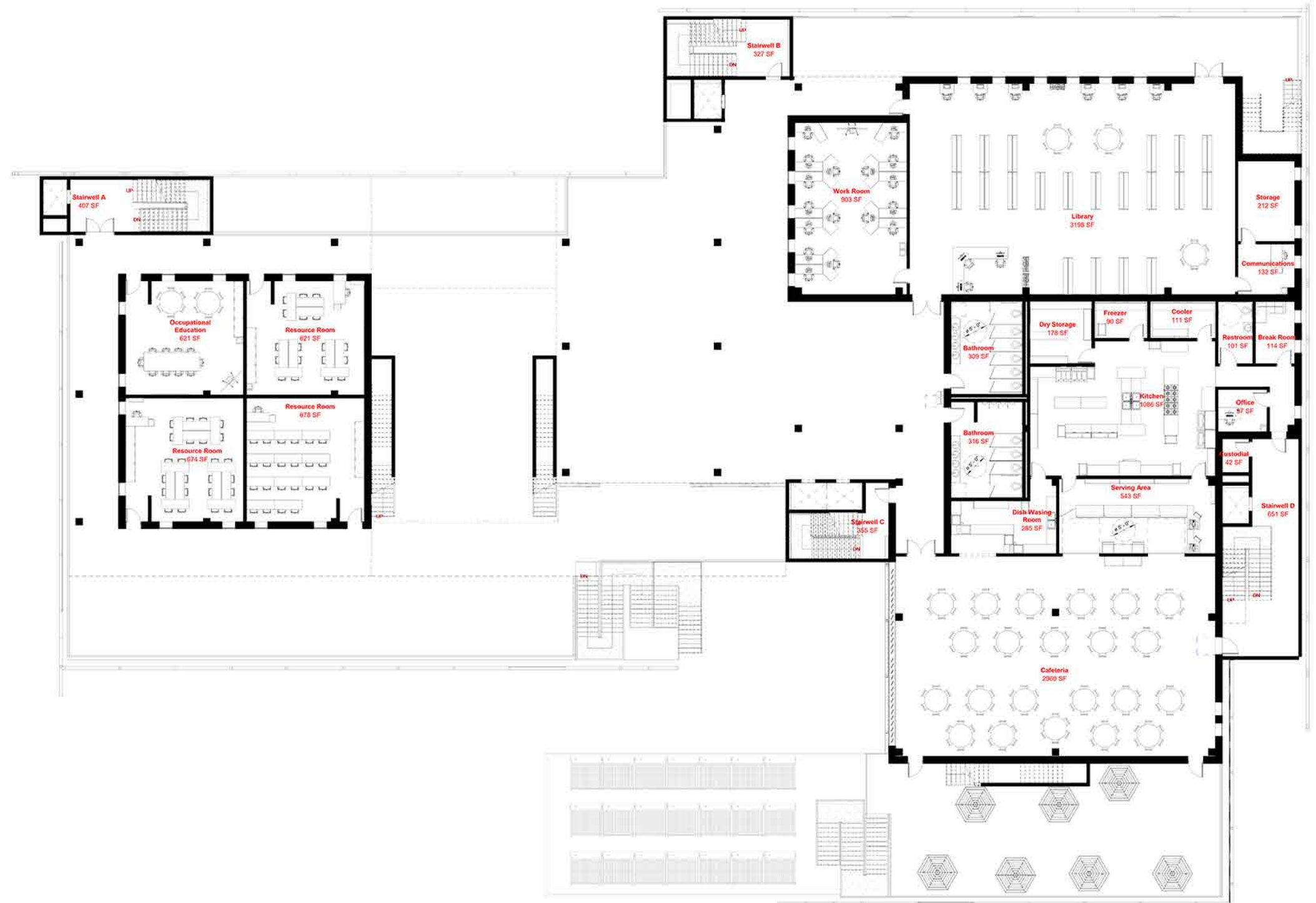
ENVELOPE



DIAGRID FRAME

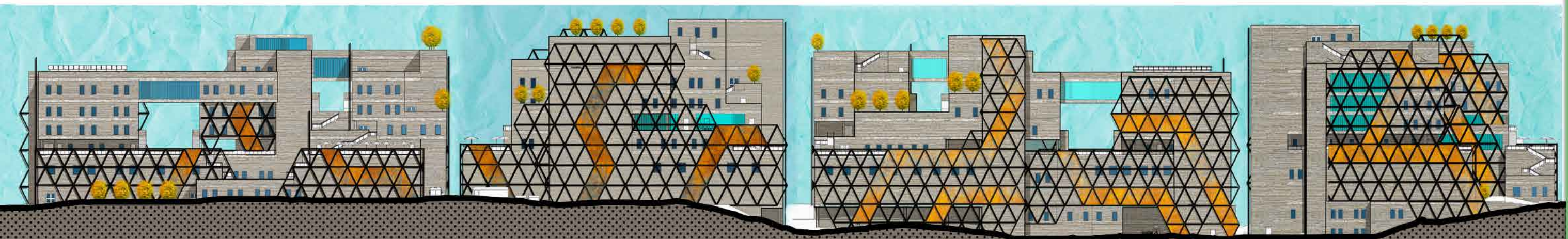


STRUCTURE

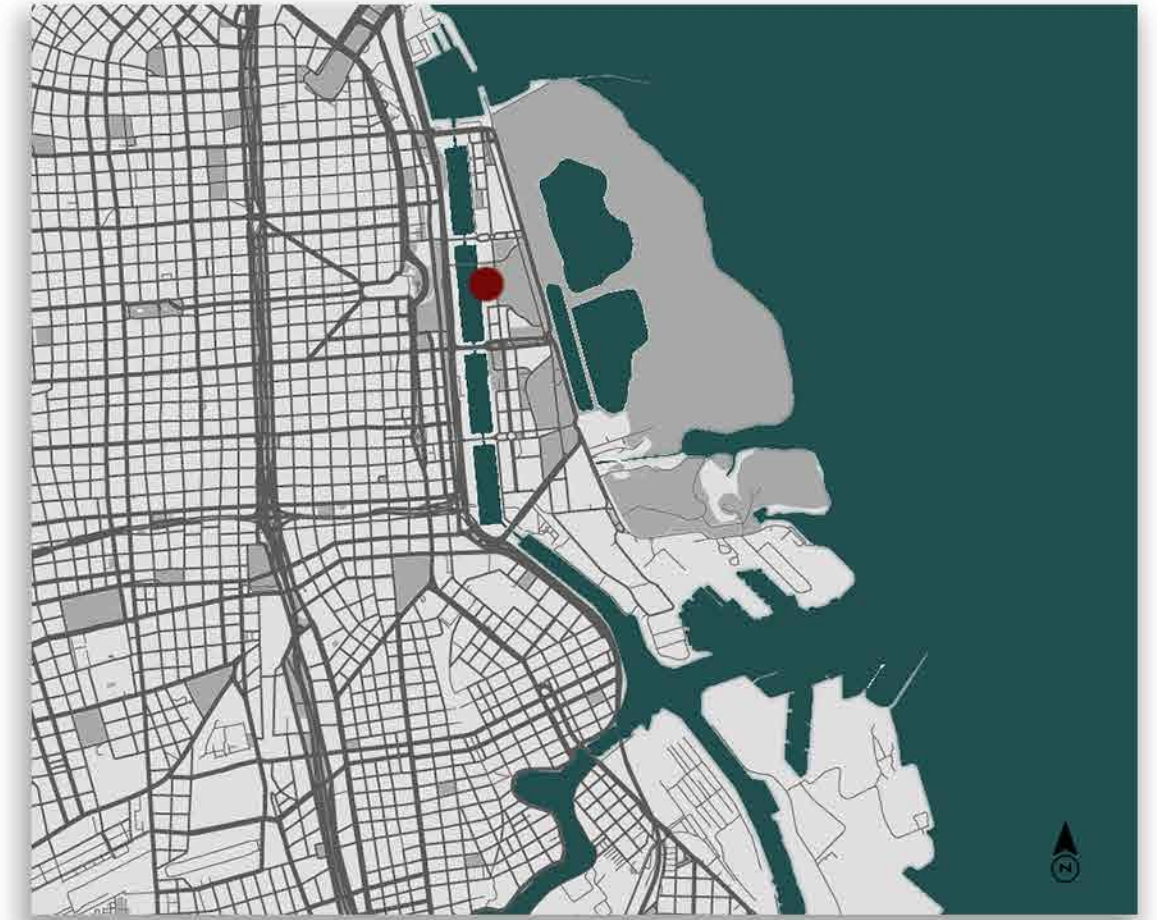




# FIFTH FLOOR PLAN







## **LA VACA LOCA RESTAURANT**

**PENNSYLVANIA COLLEGE OF TECHNOLOGY**

**AGH-432/ 4 WEEK PROJECT**

**PROFESSOR DORTHY GERRING**

**AUTODESK REVIT, TWINMOTION, ADOBE PHOTOSHOP, SKETCHUP SEFAIRA**

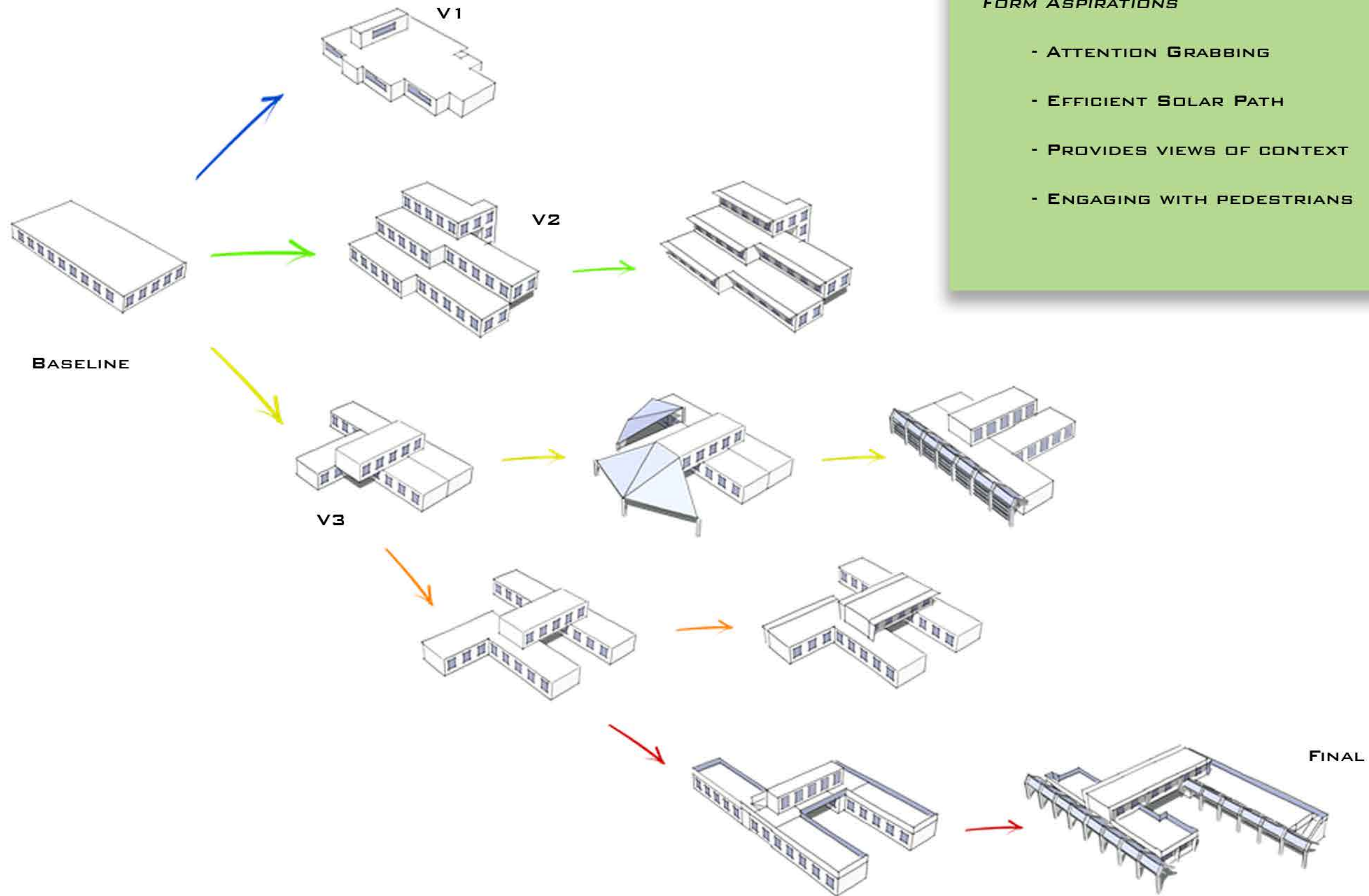
### ***PROJECT DESCRIPTION***

**THIS PROJECT IS LOCATED IN BUENOS AIRES, ARGENTINA. I WAS TASKED WITH CREATING AN INVITING EATERY ALONG A WELL-TRAVELED CANAL CLOSE TO THE CENTER OF THE CITY. THE DESIGN HARKS BACK TO THE SITE'S FORMER LIFE AS A DOCKYARD, UTILIZING RECYCLED SHIPPING CONTAINERS AS THE MAIN BUILDING BLOCK THROUGHOUT THE STRUCTURE.**





# CONCEPT DEVELOPMENT

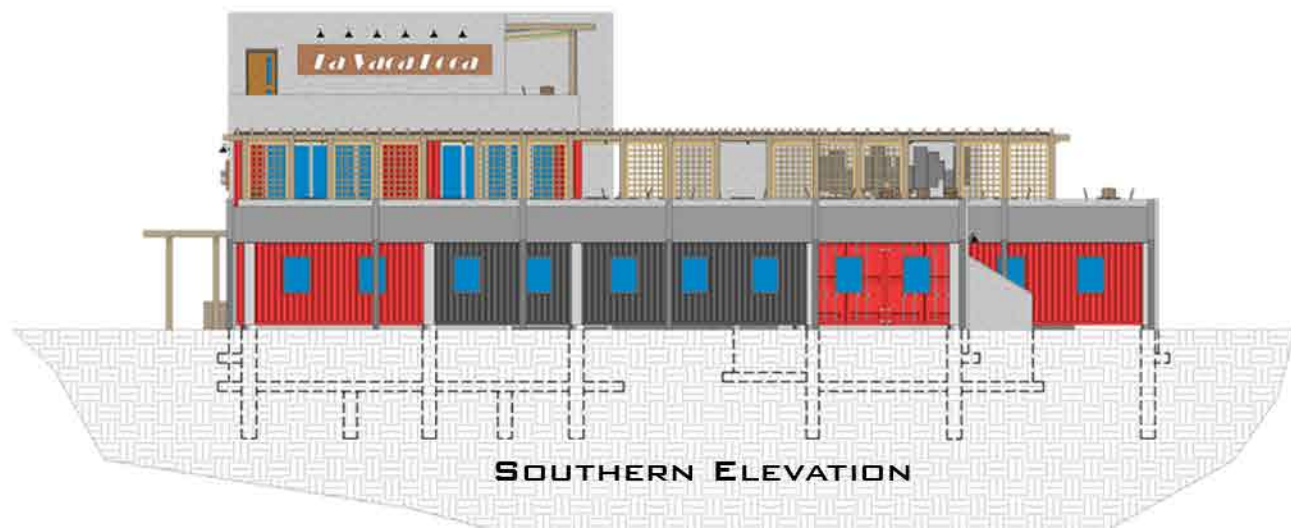
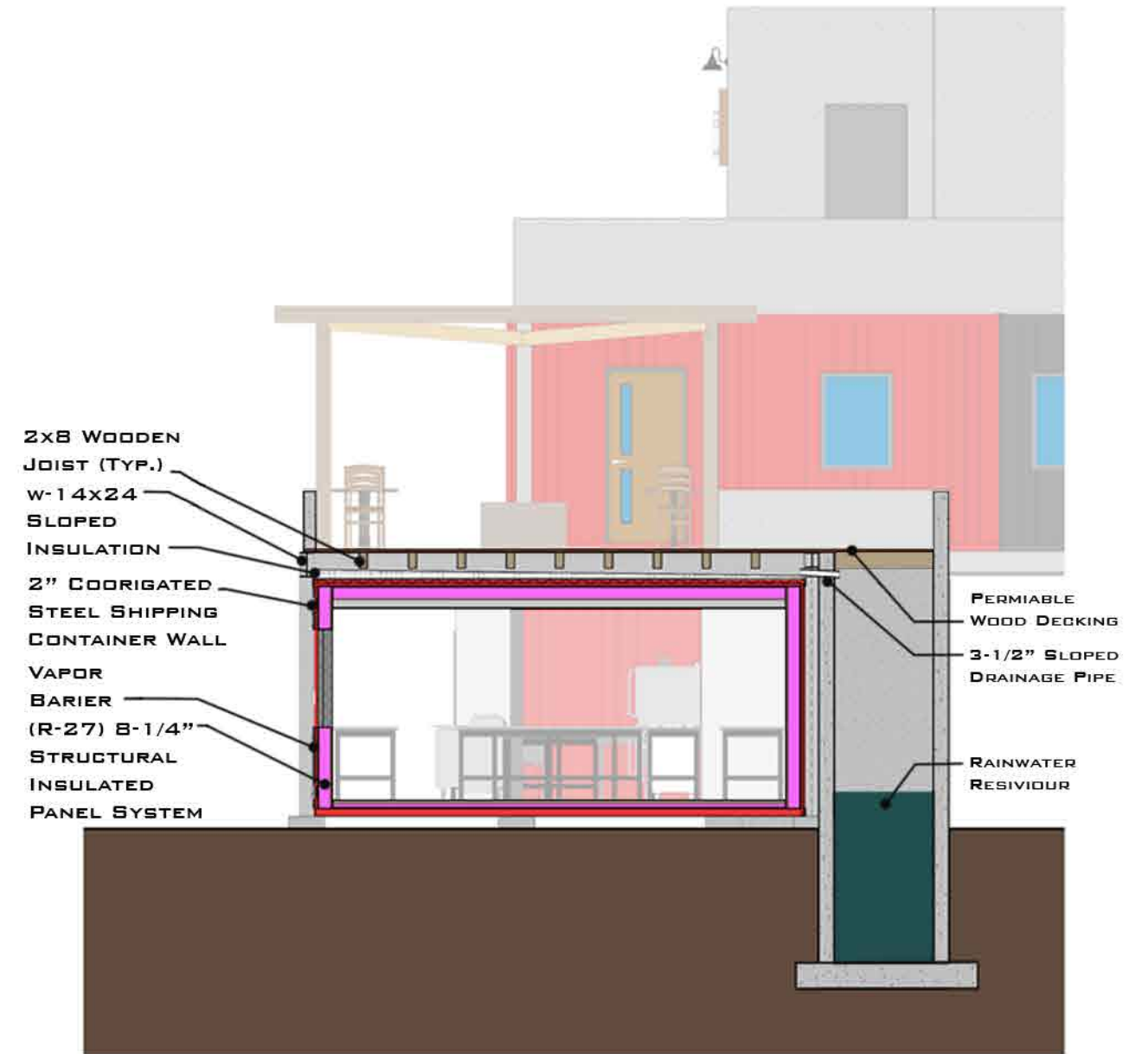


## FORM ASPIRATIONS

- ATTENTION GRABBING
- EFFICIENT SOLAR PATH
- PROVIDES VIEWS OF CONTEXT
- ENGAGING WITH PEDESTRIANS

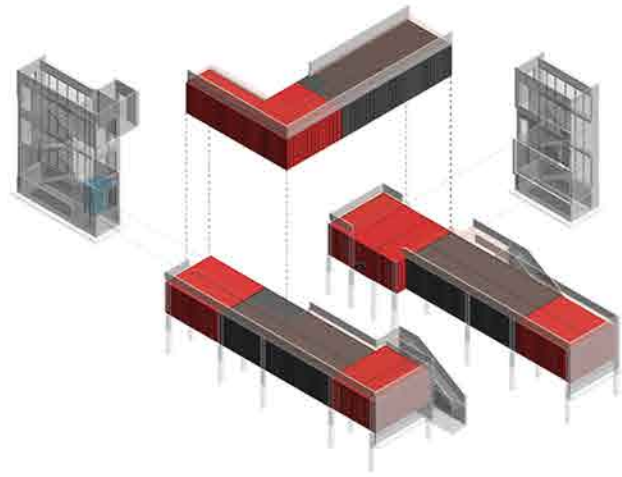


# ELEVATIONS, SECTION, & RENDERINGS

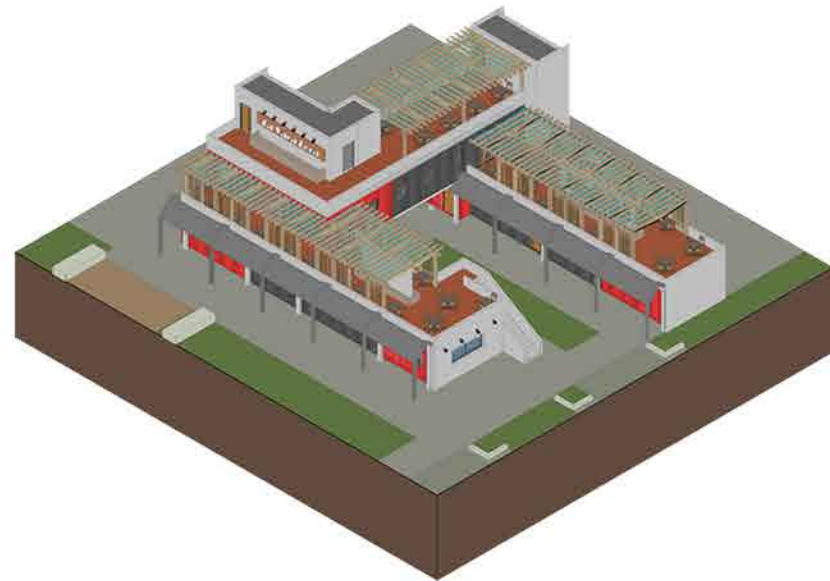




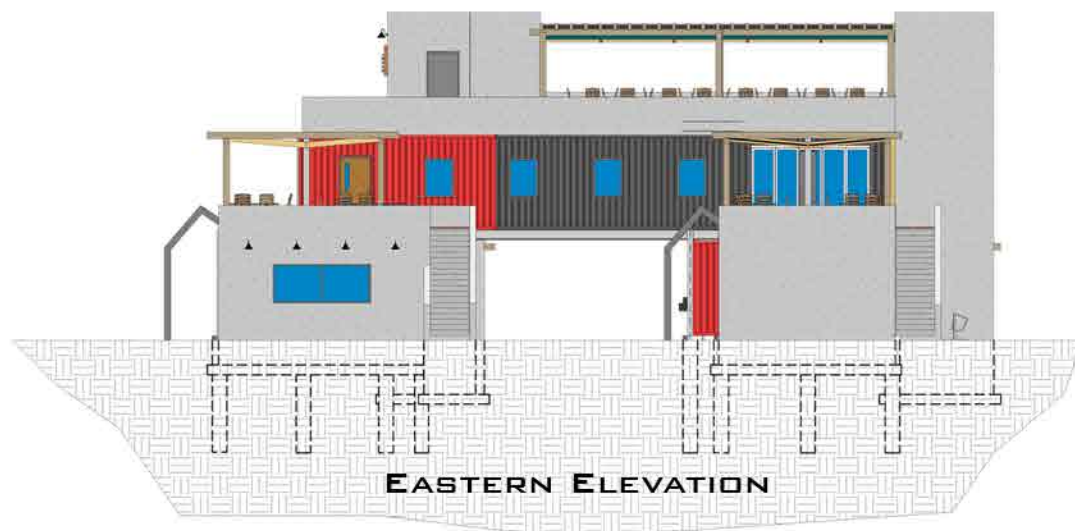
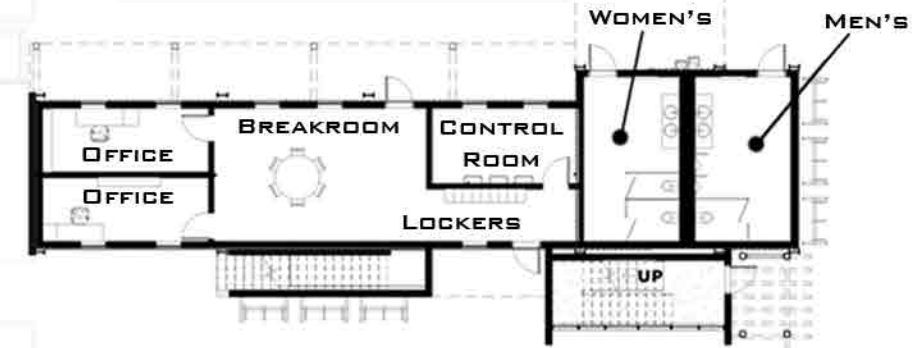
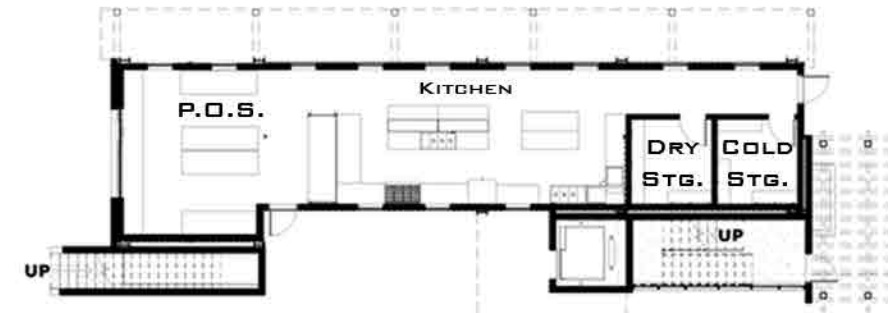
# FIRST FLOOR PLAN, ELEVATIONS & DIAGRAM



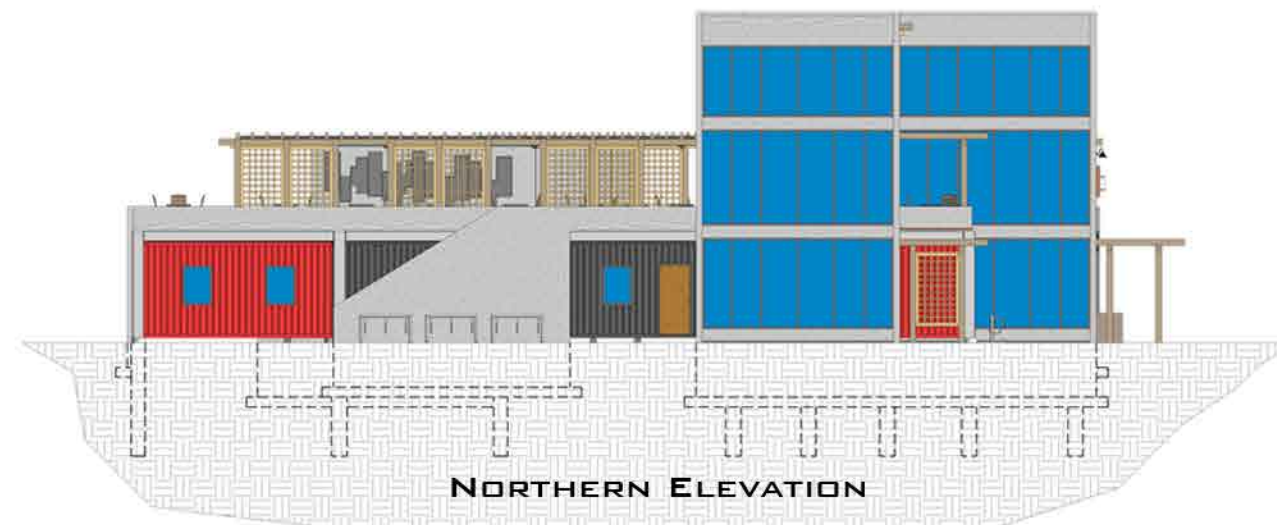
STACK DIAGRAM



Ex.  
CANAL  
BELOW



EASTERN ELEVATION



NORTHERN ELEVATION

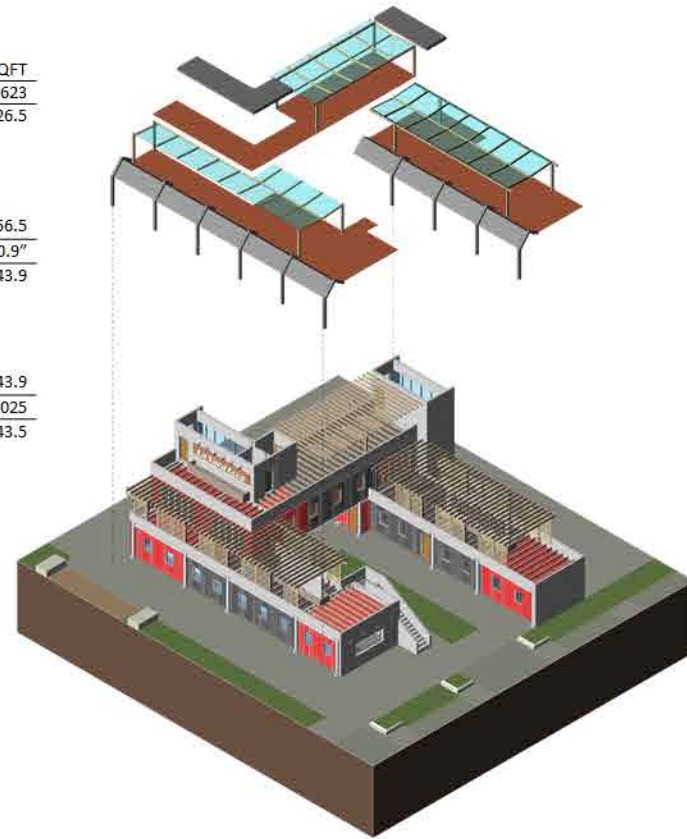


# SECOND FLOOR PLAN & RAINWATER COLLECTION

Collection Area	5500 SQFT
Gallons of rain/SQFT	X 0.623
Total collection/inch of rain	3,426.5

Total Collection/inch of rain	3,456.5
Average Annual Rainfall	X 40.9"
Total Annual Gallons Collected	140,143.9

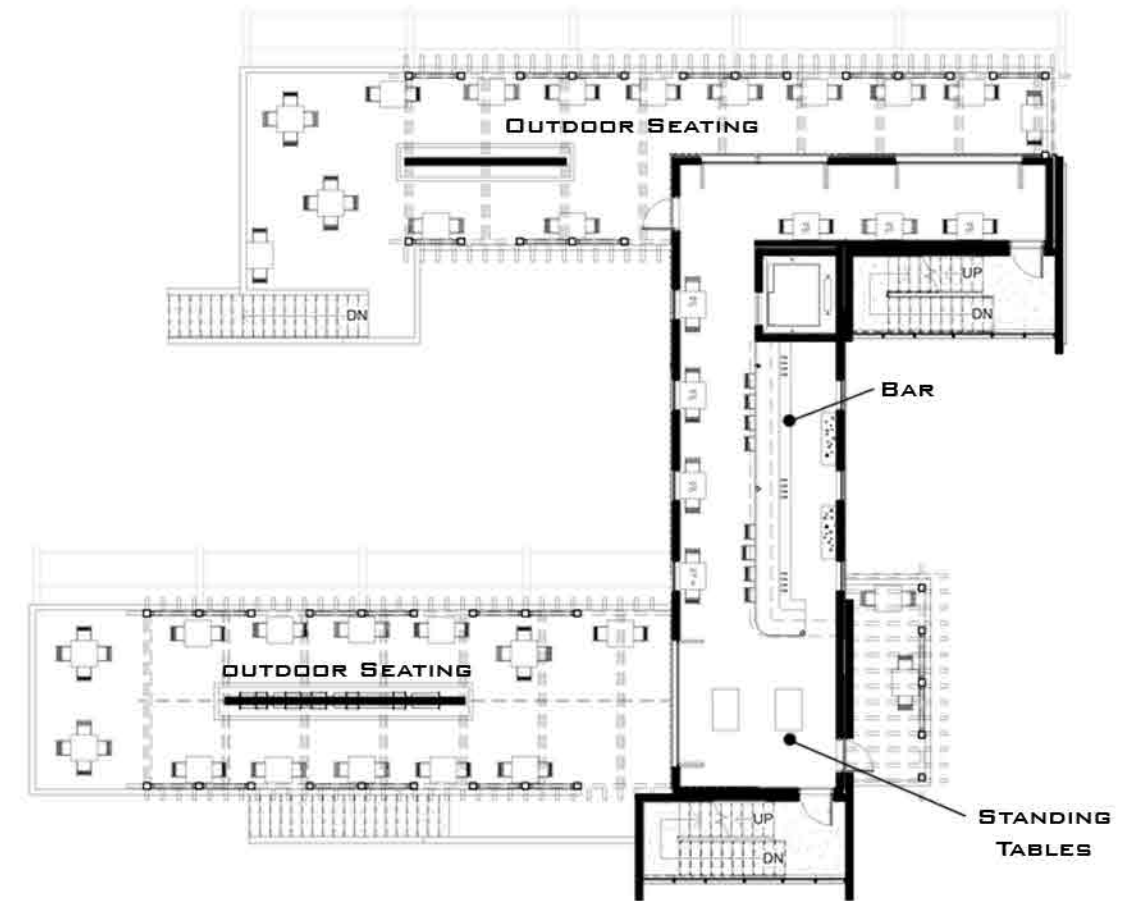
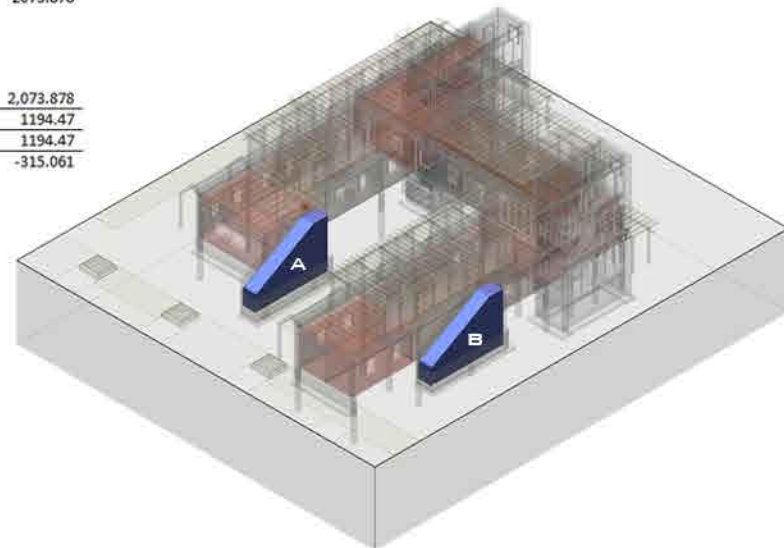
Total Gallons Collected	140,143.9
Gallons Used/Day	408.025
Days of Graywater Capacity	343.5



Collection Area	5500 SQFT
Gallons of rain/SQFT	X 0.623
Highest rainfall in month	X 4.528"
Number of Gallons to store	11,513.68

Number of gallons to store	11,513.68
Gallons per cubic foot	X 7.48052
Total Cubic Feet required	2073.878

Cubic Feet needed	2,073.878
Stairwell A	1194.47
Stairwell B	1194.47
Additional Cubic Feet Needed	-315.061



COVERED OUTDOOR DINING



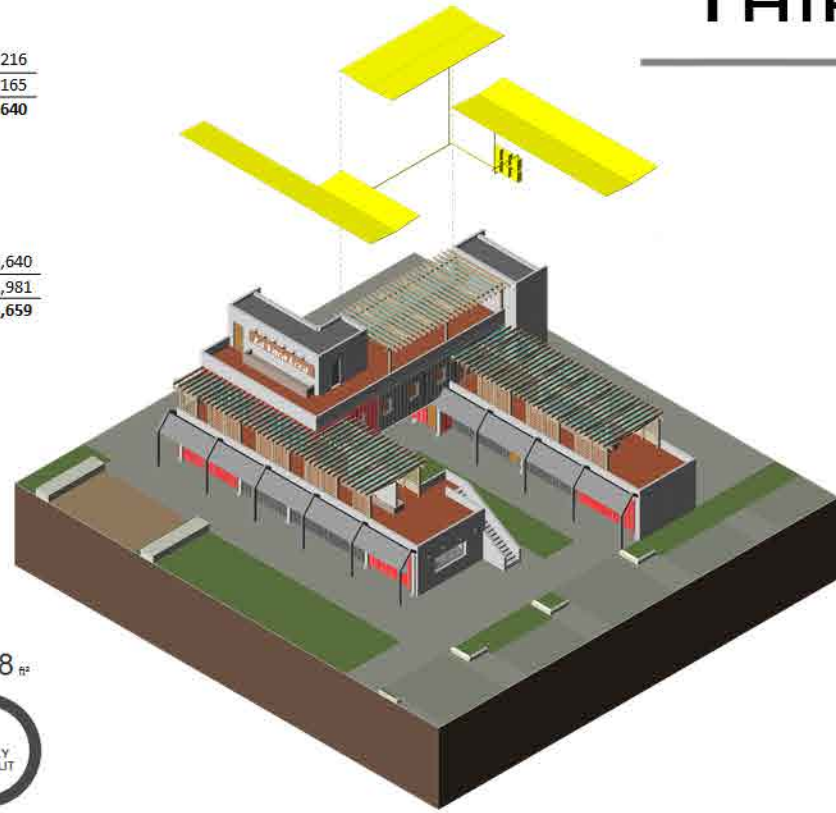
VIEW OF BAR



# THIRD FLOOR PLAN, DIAGRAMS, & RENDERINGS

Number of Panels	216
Panel STC Rating	165
Gross Watts Produced	35,640

Gross Watts Produced	35,640
Watts needed	31,981
Net Watts Produced	3,659



Total Floor Area 4,608 sq ft

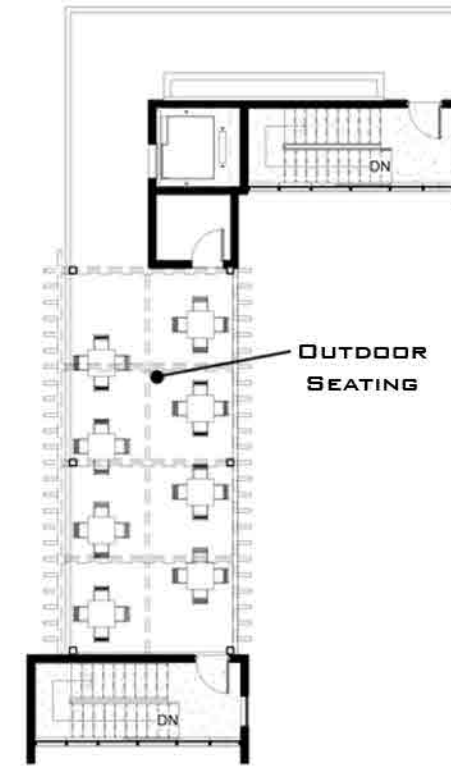
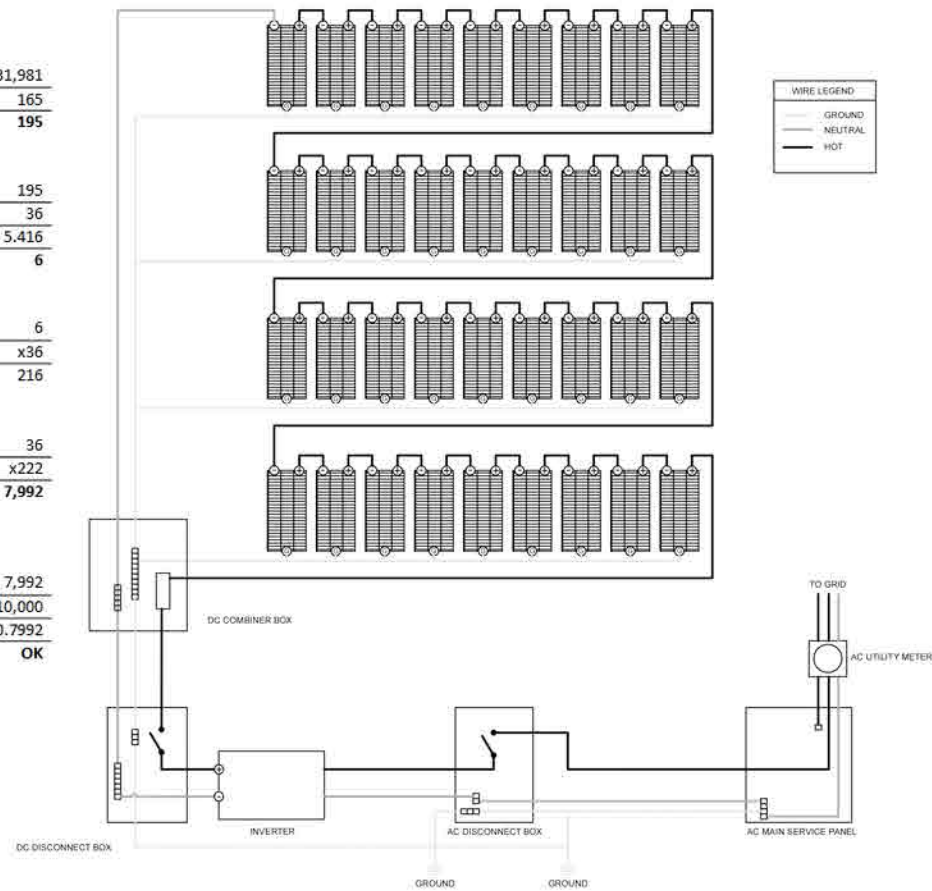
PV Array Watts Needed	31,981
Panel STC Watt Rating	165
Minimum Panels Needed	195

Minimum Panels Needed	195
Max Panels Per String	36
Calc.	5.416
Minimum Strings Needed	6

Strings Needed	6
Max Panels Per String	x36
Actual Panel Count	216

Max Panels in String	36
Inverter STC watt rating	x222
Max Watts Inverter Passes	7,992

Max Watts Inverter Must Pass	7,992
Inverter Watt Rating	10,000
Calc.	0.7992
String To Inverter Loads	OK

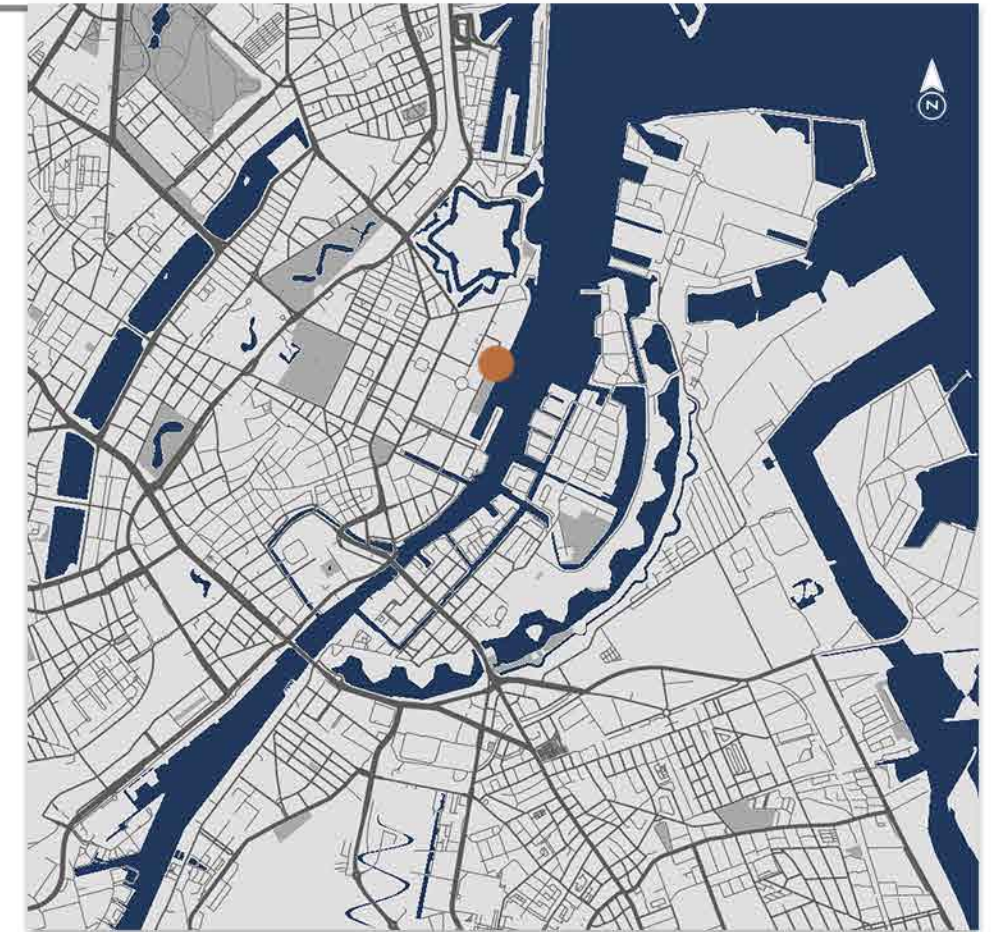
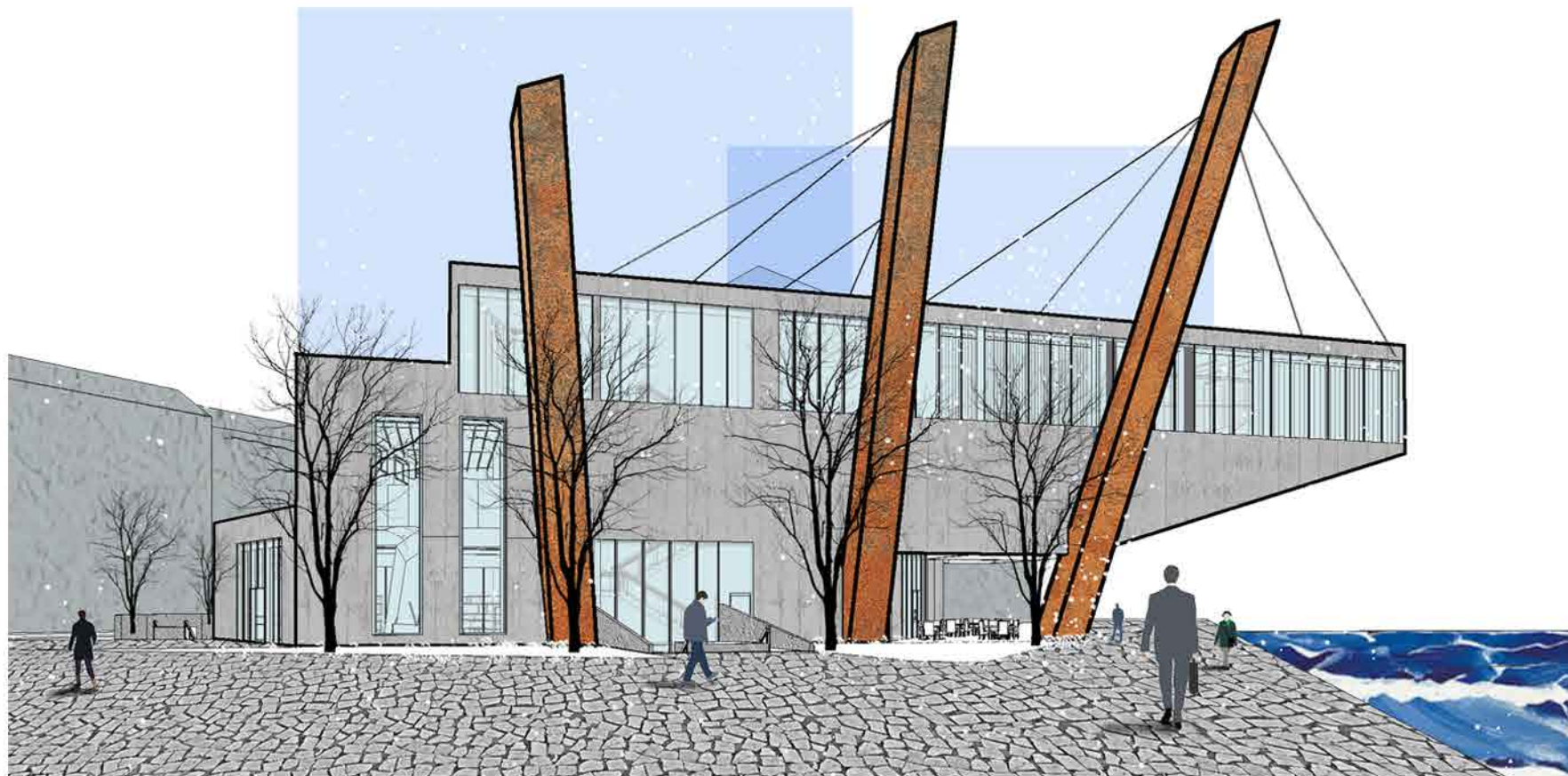


NORTHERN APPROACH



ROOFTOP DINING VIEW





## **COMMUNITY HUB & MUSEUM**

**PENNSYLVANIA COLLEGE OF TECHNOLOGY  
ACH-332/ 6 WEEK PROJECT  
PROFESSOR NAIM JABBOUR  
AUTODESK REVIT, SEFAIRA & PHOTOSHOP**

### ***PROJECT DESCRIPTION***

**THE BRIEF CALLED FOR A MUSEUM AND ARCHITECTURAL CENTER FOUND ALONG THE CANALS OF COPENHAGEN, DENMARK. THE BUILDING CONSISTS OF A LEARNING CENTER, EXHIBIT SPACE, AND CAFE.**

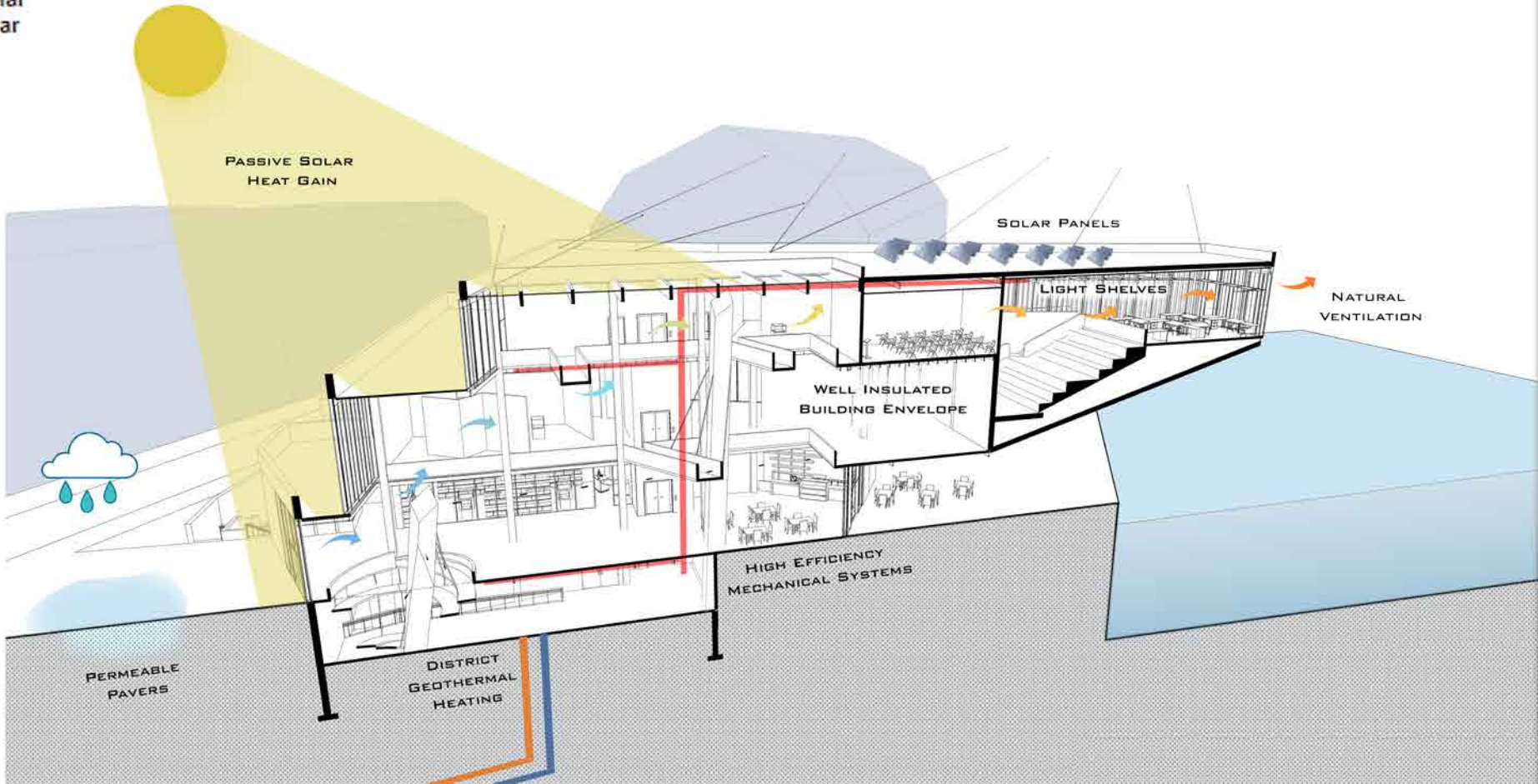
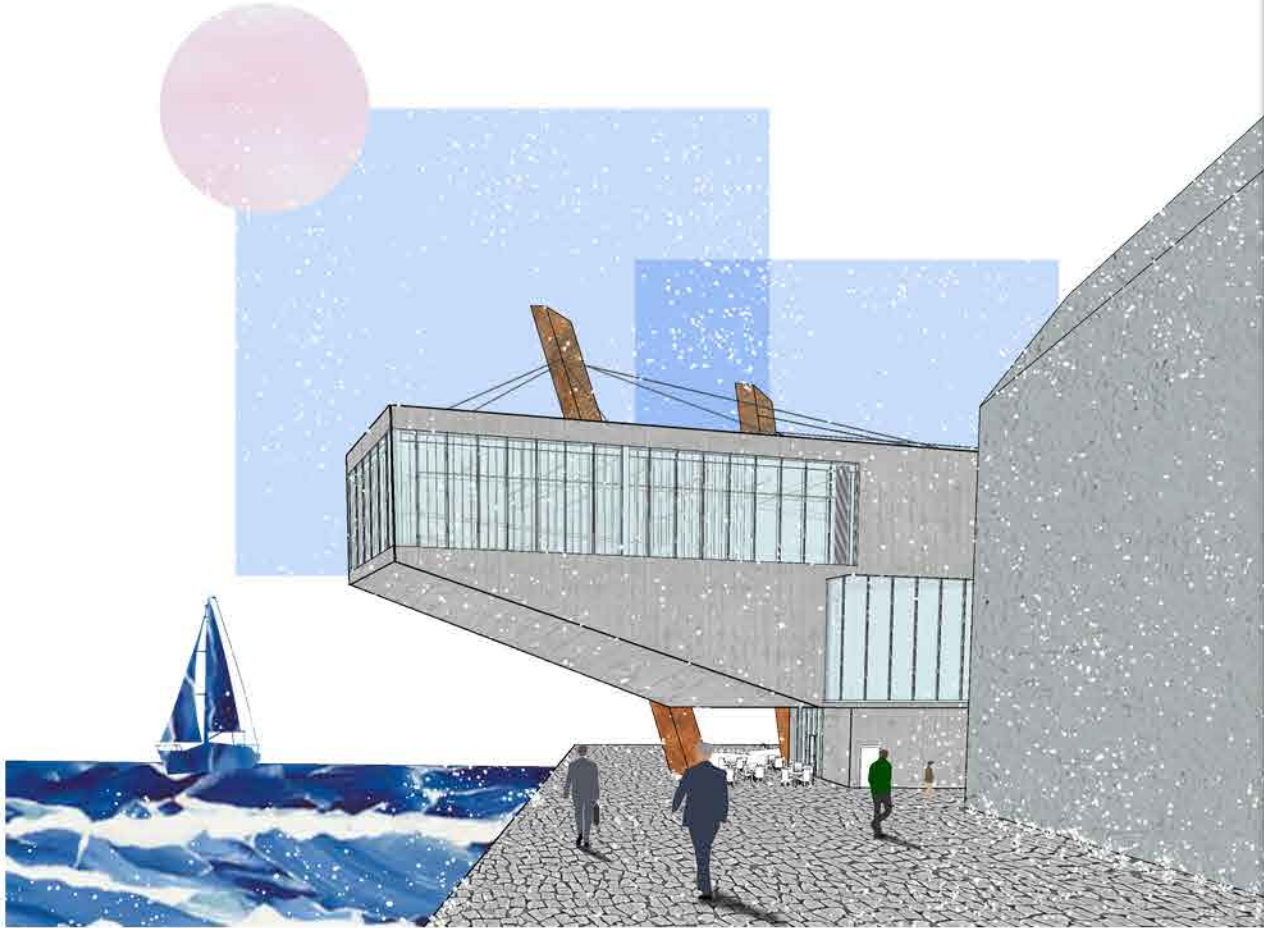
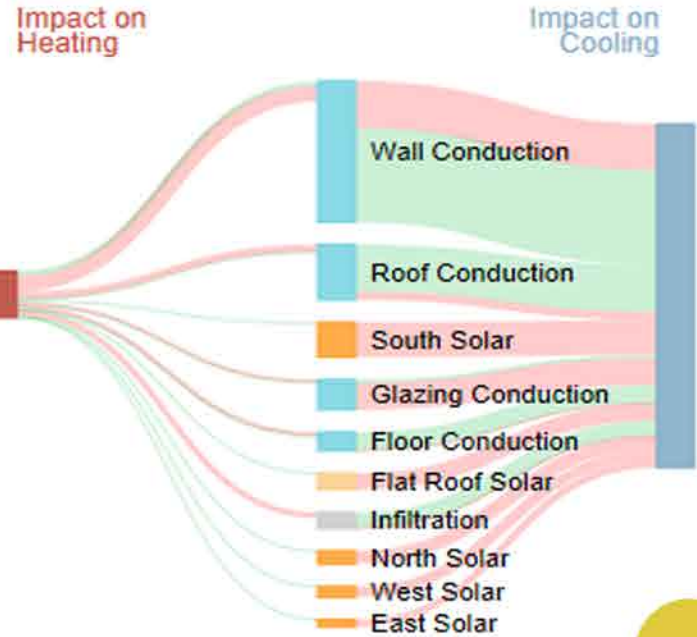


**CONCEPT MODEL**





# ENERGY ANALYSIS

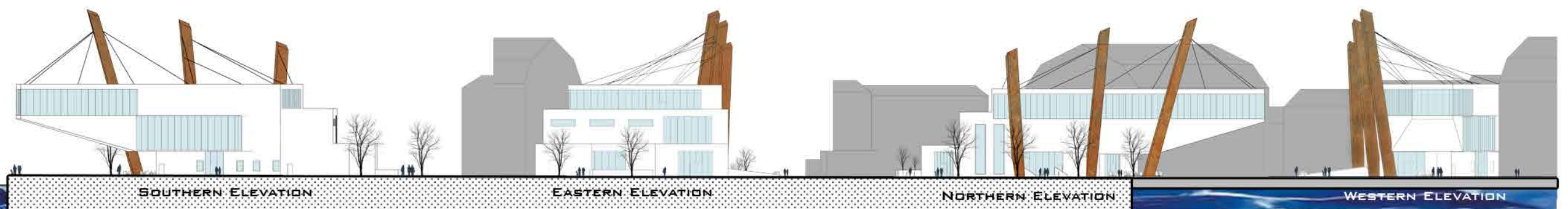
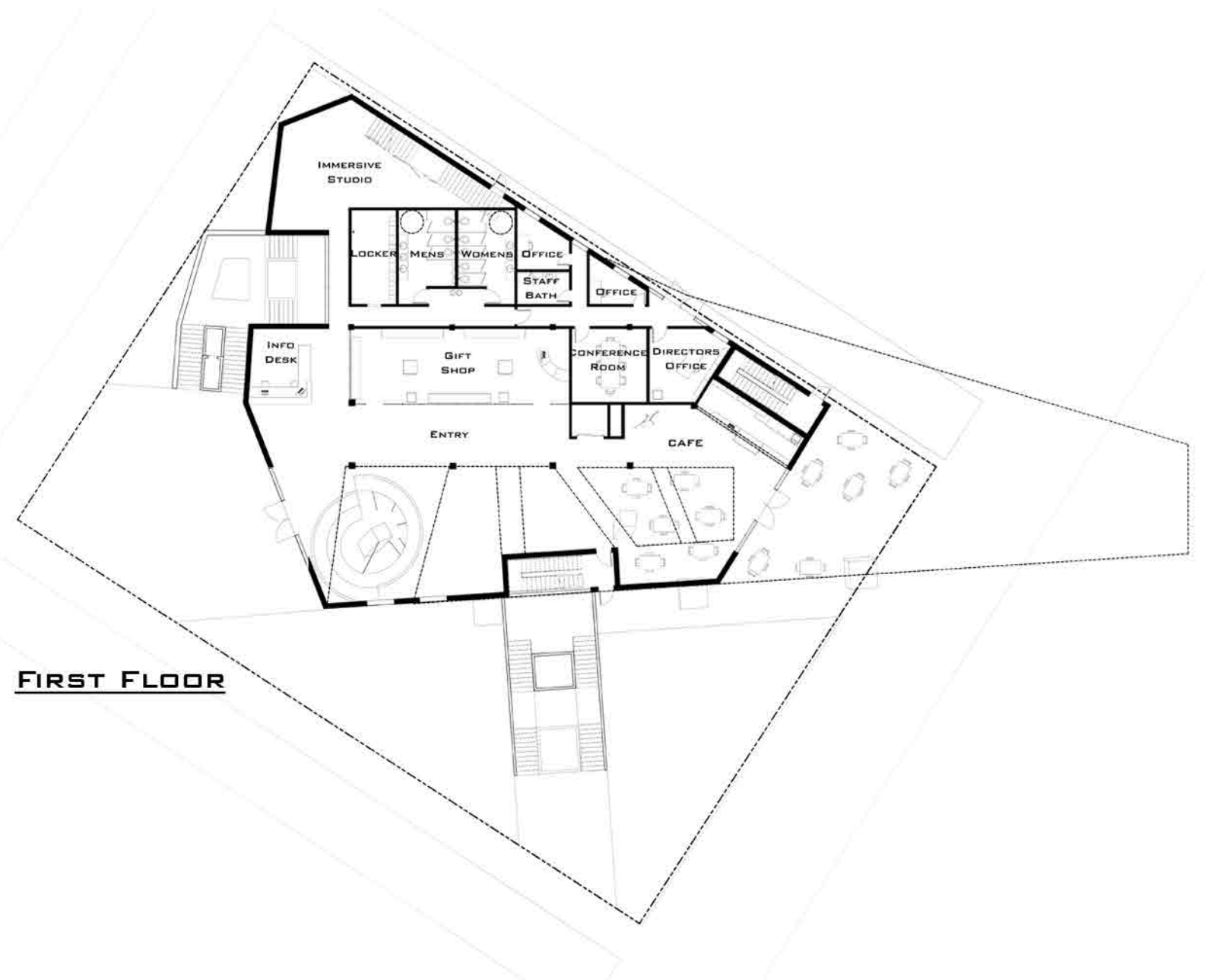
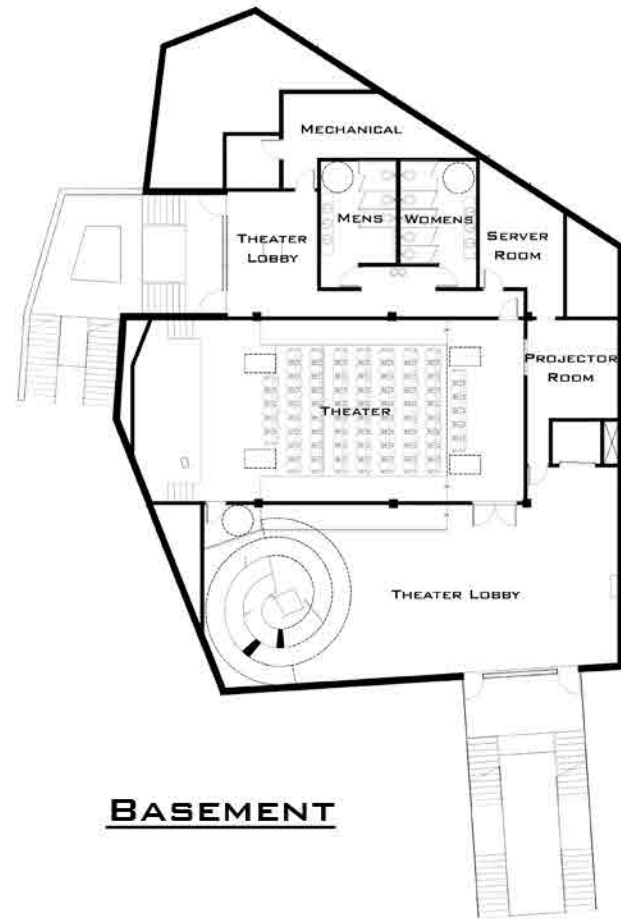


## DESIGN APPROACH

COPENHAGEN AS A CITY IS STEEPED IN RICH CULTURE AND HISTORY. TAPPING INTO THE SURROUNDINGS AND ITS PAST LEAD ME TO DEVELOP A FORM THAT EMULATED A SHIP CRESTING OVER WAVES. I ALSO WAS INTERESTED IN OVERHANGING THE CANAL, AND TO DO SO I UTILIZED STRUCTURAL MASTS THAT AGT SIMILARLY TO HOW SUSPENSION BRIDGES HOLD UP SPANS OF ROAD.

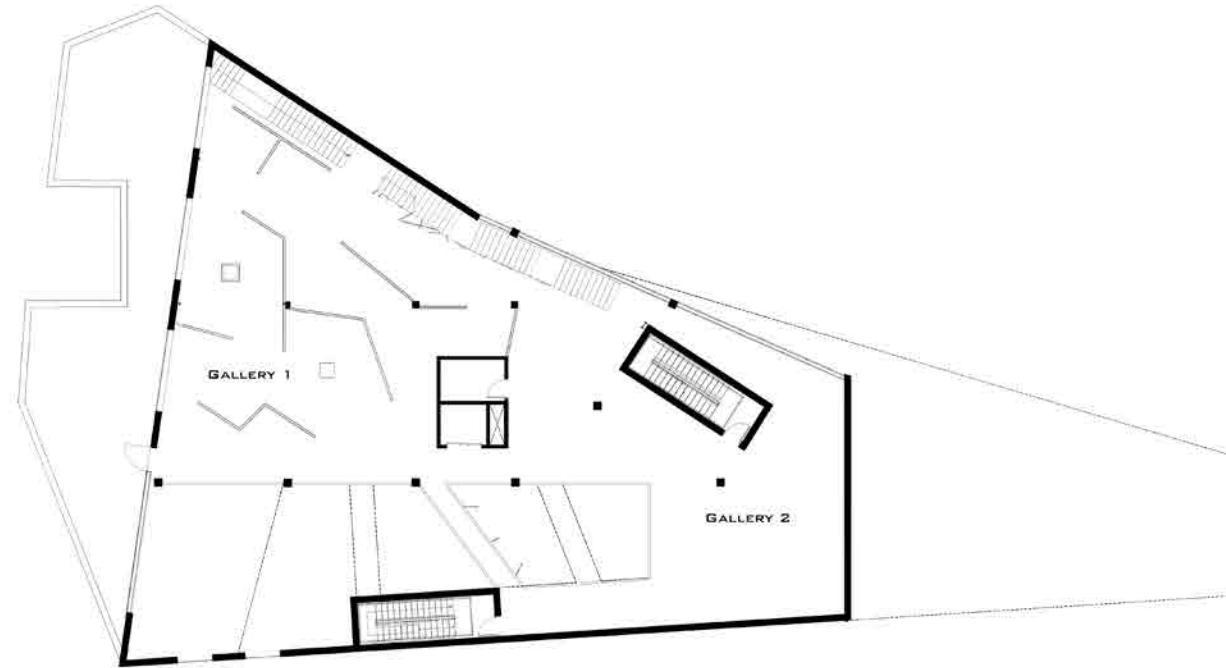


# PLANS & ELEVATIONS

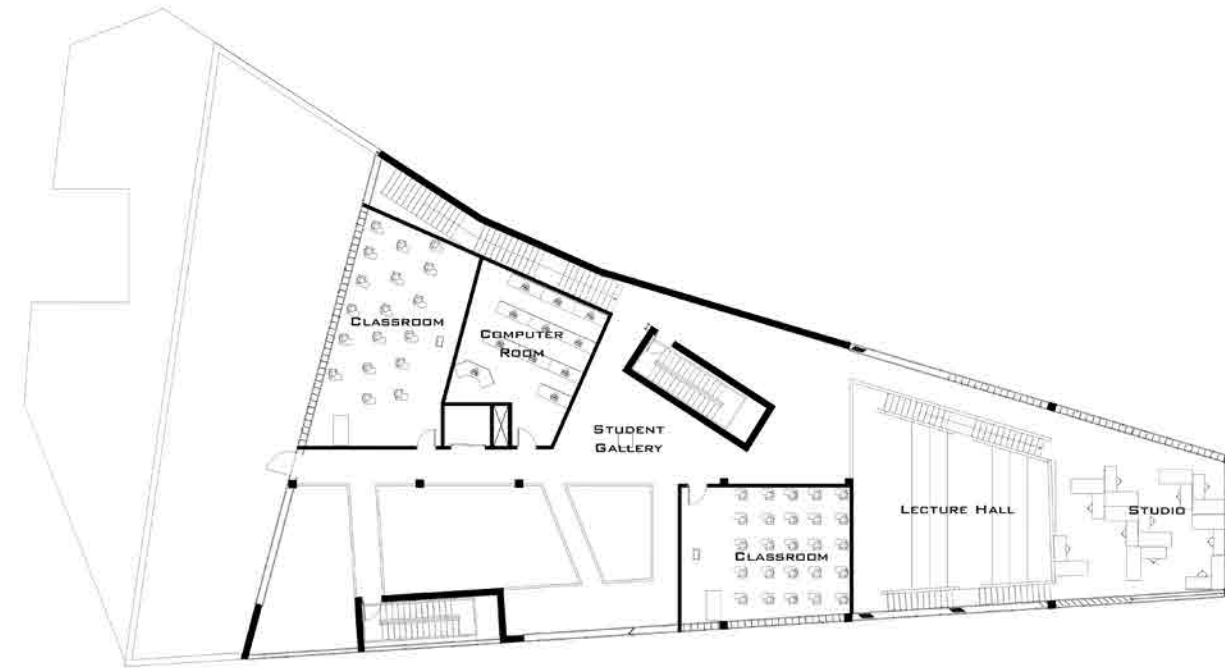




# PLANS & RENDERINGS



SECOND FLOOR



FIRST FLOOR

ENTRY



GALLERY



STUDIO





# PIERCE



## **RESORT & MENAGERIE**

**PENNSYLVANIA COLLEGE  
OF TECHNOLOGY**

**ACH-261/ 8 WEEK PROJECT  
PROFESSOR DORTHY GERRING  
AUTODESK REVIT, SEFAIRA,  
TWINMOTION, & PHOTOSHOP**

### ***PROJECT DESCRIPTION***

**THE BRIEF FOR THIS PROJECT CALLED FOR A 250 ROOM RESORT FOUND IN THE MARINA BAY REGION OF SINGAPORE. WE WERE ALSO TASKED WITH INCLUDING A ZOO AND AQUARIUM WITHIN THE COMPLEX TO HELP DRAW MORE TENANTS INTO THE STRUCTURE.**





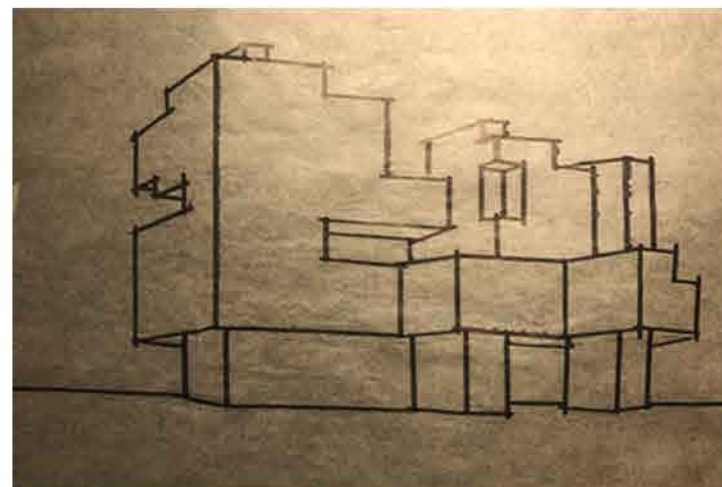
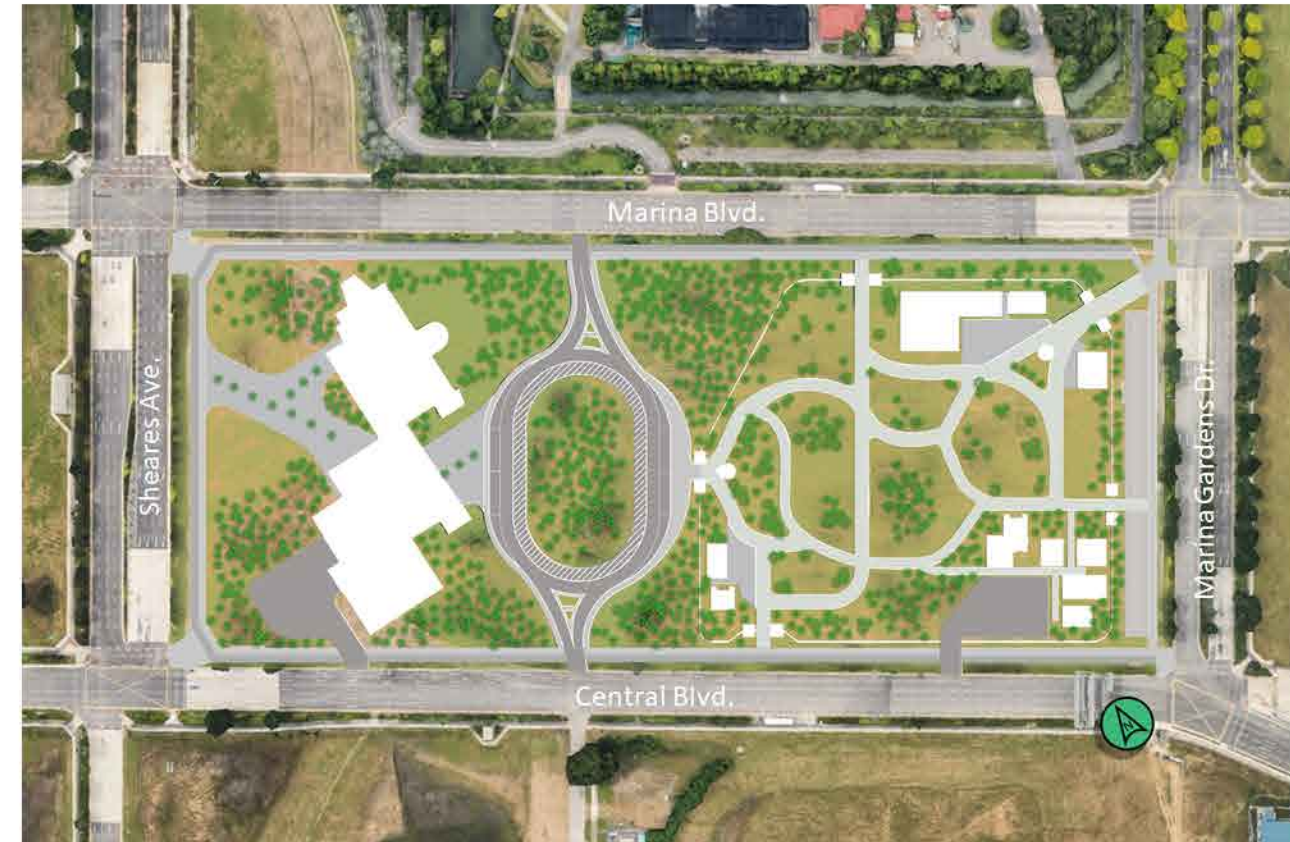
**MULU PINNACLES**  
fascinating geological feature



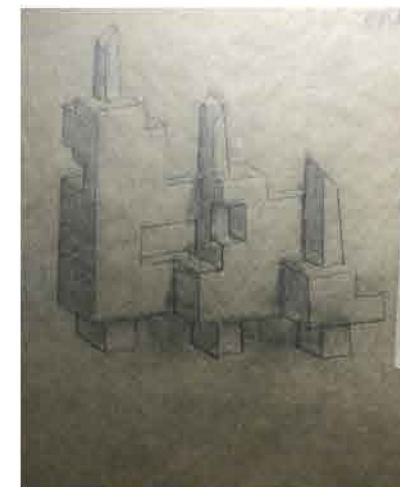
# CONCEPT DEVELOPMENT

**CONCEPT DEVELOPMENT**

I WAS INSPIRED BY THE NATURAL LANDMARKS OF THE REGION AND TRIED TO TRANSLATE IDEAS OF LAYERING, MONOLITHIC, PIERCING, AND PARTIAL TRANSPARENCY TO THE FORM. THROUGH MY DESIGN ITERATIONS, I EXPLORED HOW THE TREATMENT OF THE FACADE CHANGED THE EMOTIONS THE FORM EXPRESSED. DECIDING TO INTEGRATE PLANTER BOXES ON THE EXTERIOR OF THE BUILDING REMINDED ME OF THE LAYERING OF TREES THAT CAN BE SEEN ON MOUNTAINS.



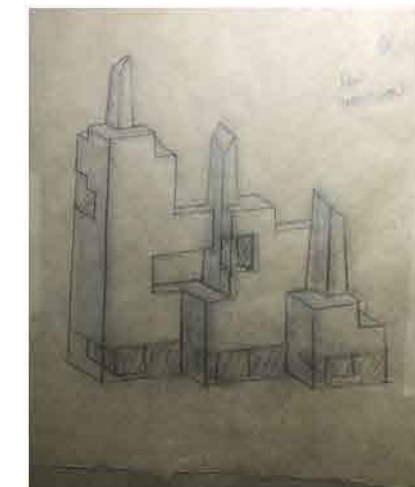
VERSION 1



V2



V3



V4



# OVERVIEW

## SURROUNDING CONTEXT

THE SITE (SEE [1] BELOW) IS SITUATED AT THE CENTER OF A MAN-MADE PIER JUST SOUTH OF AN EXISTING BUSINESS DISTRICT IN SINGAPORE. LAND WITHIN THE REGION IS SLATED TO BE DEVELOPED INTO A LEISURE DISTRICT, CONSISTING MAINLY OF RESORTS AND PUBLIC PARKS. THE PIER IS CURRENTLY UNDER CONSTRUCTION, AND WILL LATER BE HOST TO A CANAL ENDING AT A MAN-MADE LAKE (SEE [2] BELOW).

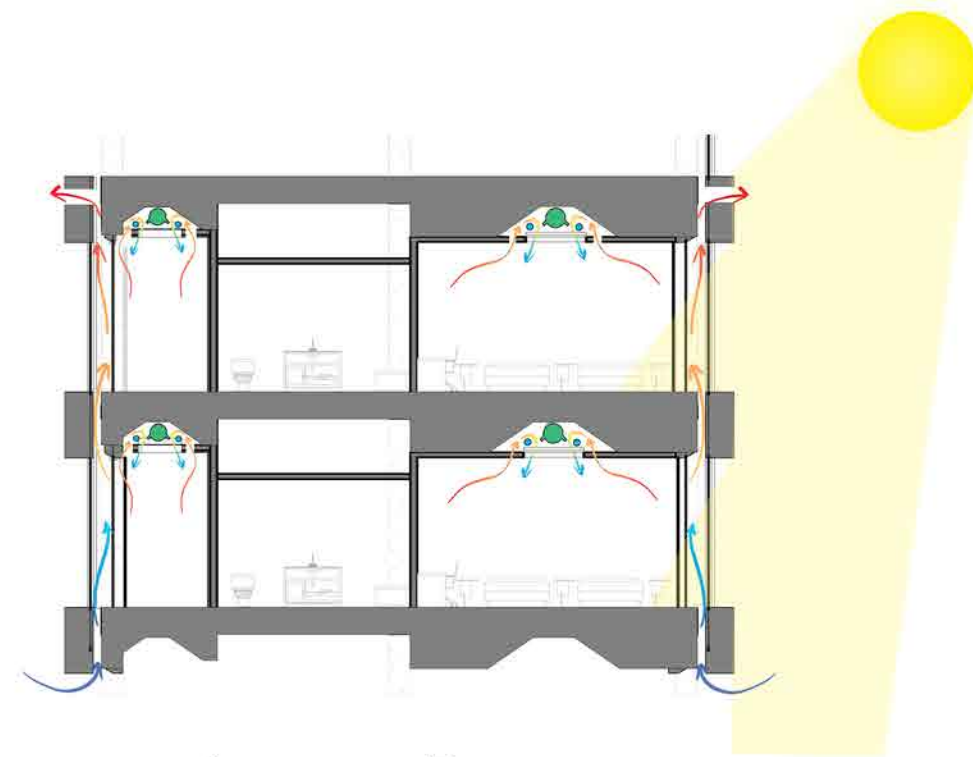
TO THE EAST LIES THE GARDENS BY THE BAY DISTRICT (SEE [3] BELOW). THE COMPLEX CONSISTS OF AN ASSORTMENT OF COMMUNITY WATERFRONT PARKS. A TRANSPORT HUB IS ALSO SLATED TO BE CONSTRUCTED CONNECTING THE PIER TO SINGAPORE'S NEW MASS RAPID TRANSIT SYSTEM (SEE [4] BELOW). SOUTHWEST OF THE PROPOSED PROJECT, A CRUISE LINE DOCK CAN BE FOUND (SEE [5] BELOW)



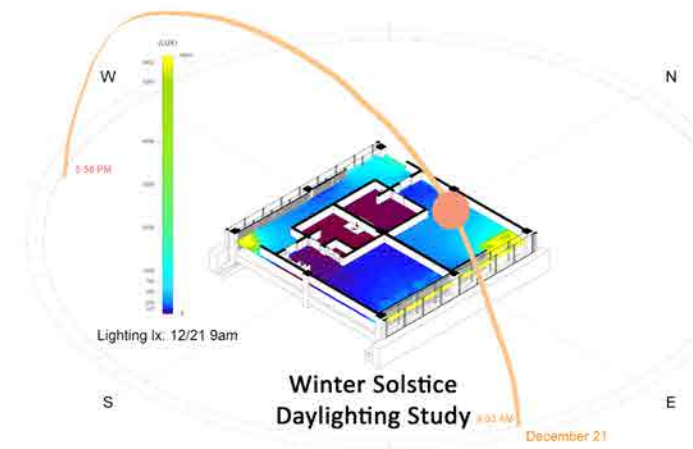
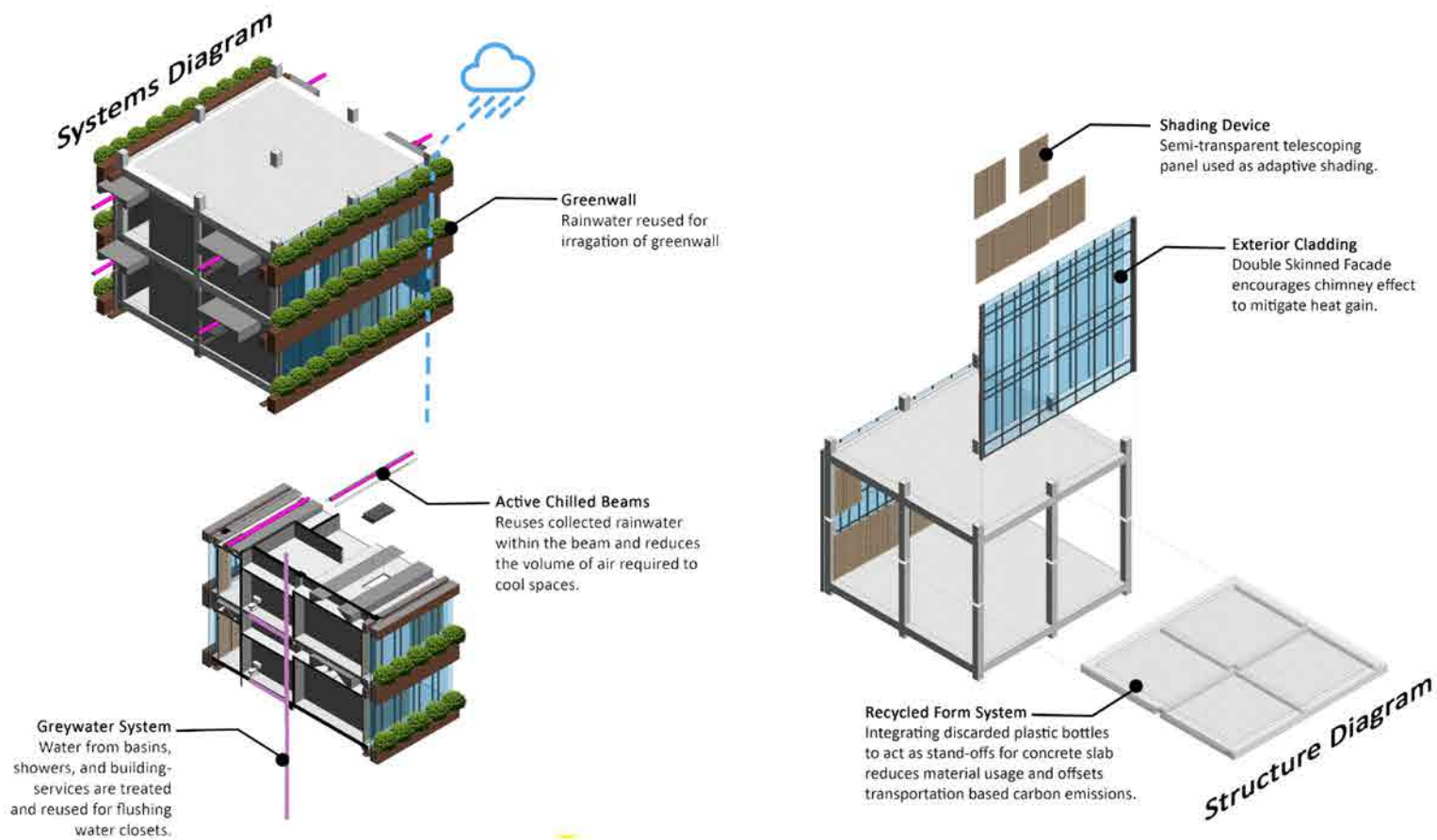




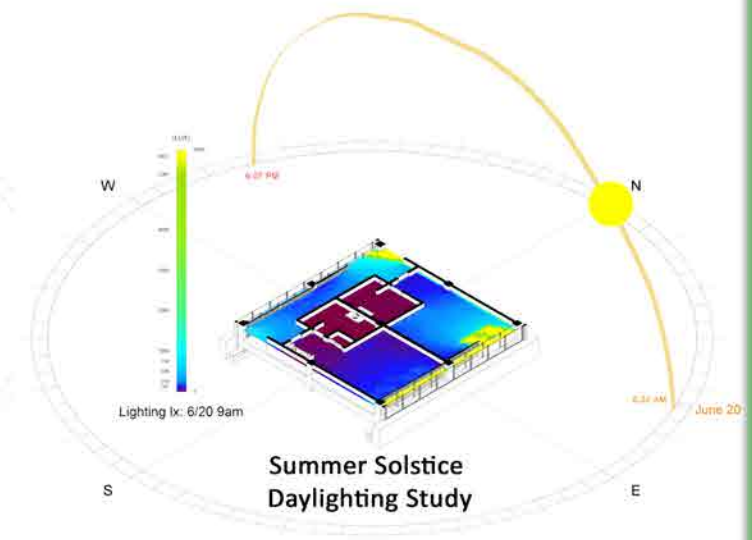
# DIAGRAMS



AIRFLOW DIAGRAM



Winter Solstice Daylighting Study



Summer Solstice Daylighting Study

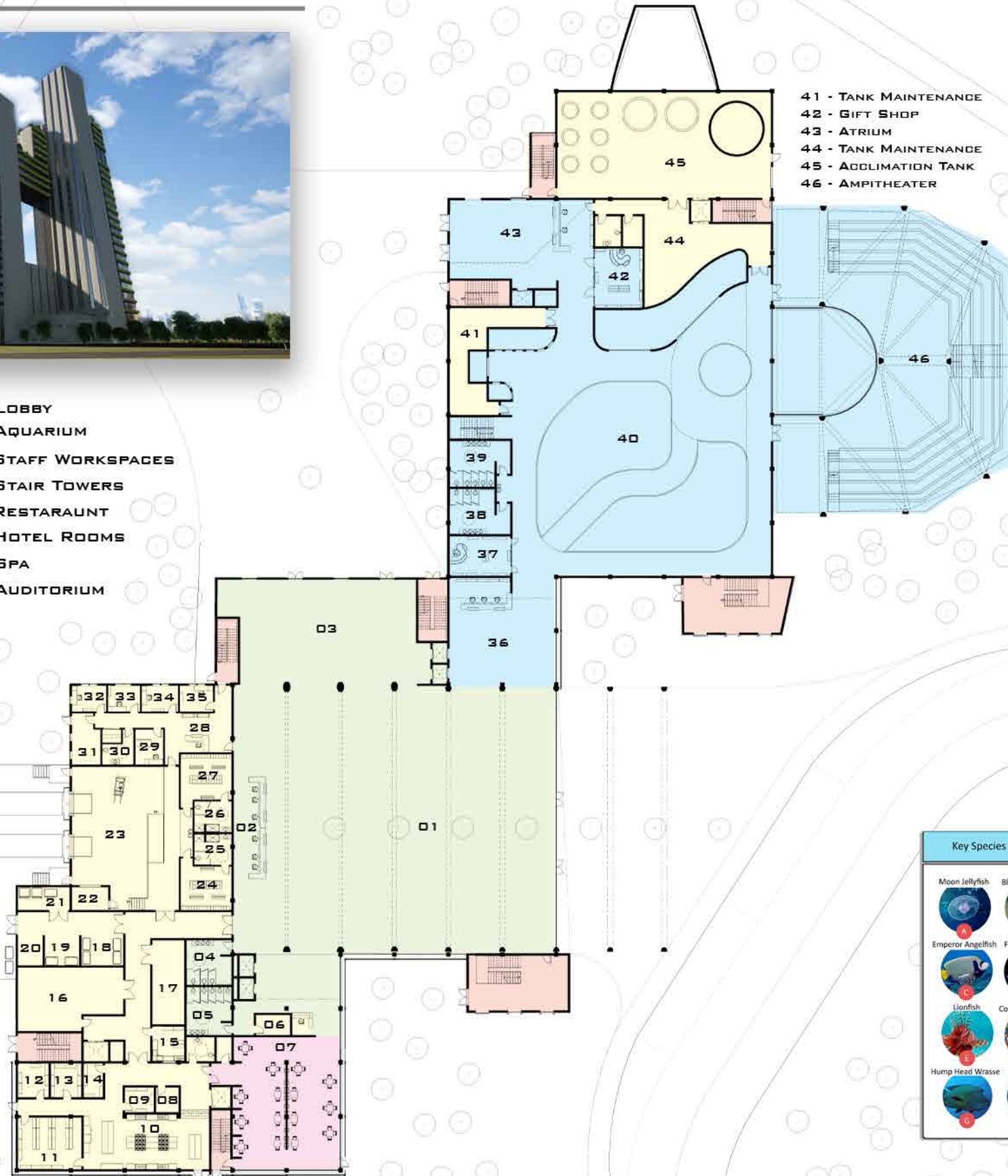


# FIRST FLOOR PLAN



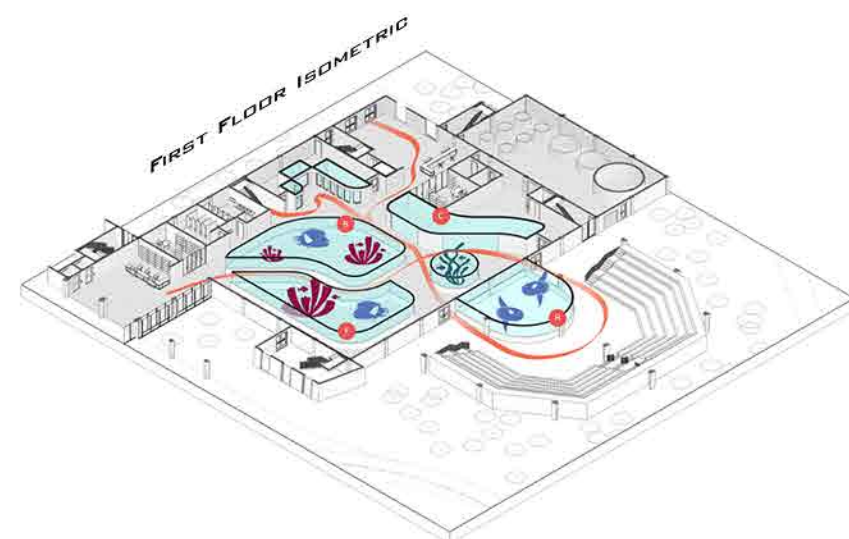
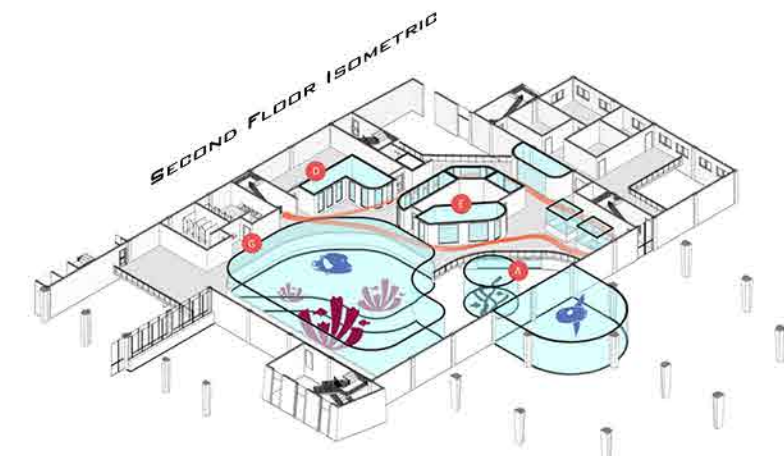
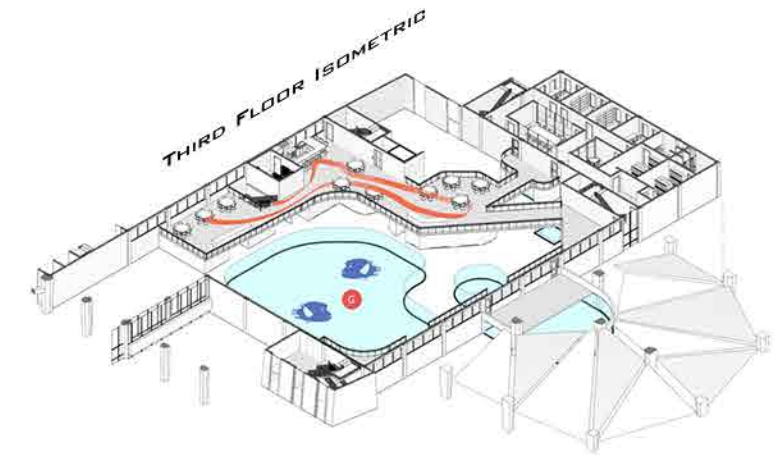
- 01 - MAIN LOBBY
- 02 - RECEPTION
- 03 - ATRIUM
- 04 - MEN'S BATH
- 05 - WOMEN'S BATH
- 06 - JANITORS CLOSET
- 07 - RESTARAUNT
- 08 - JANITORS CLOSET
- 09 - STORAGE
- 10 - KITCHEN
- 11 - DRY STORAGE
- 12 - COLD STORAGE
- 13 - FROZEN STORAGE
- 14 - BEVERAGE STORAGE
- 15 - WASHROOM
- 16 - MAINTINANCE ROOM
- 17 - GENERAL STORAGE
- 18 - TRASH HOLDING
- 19 - BOTTLE STORAGE
- 20 - CANWASH
- 21 - COMPACTING ROOM
- 22 - LOCKED STORAGE
- 23 - LOADING DOCK
- 24 - WOMEN'S LOCKER ROOM
- 25 - WOMEN'S SHOWERS
- 26 - MEN'S LOCKER ROOM
- 27 - MEN'S SHOWERS
- 28 - STAFF RECEPTION
- 29 - FIRST AID ROOM
- 30 - STAFF BATHROOM
- 31 - STAFF LOUNGUE
- 32 - TIME KEEPER'S OFFICE
- 33 - PAYROLL MANAGER'S OFFICE
- 34 - FRONT MANAGER'S OFFICE
- 35 - RESERVATION MANAGER'S OFFICE
- 36 - AQUARIUM LOBBY
- 37 - GIFT SHOP
- 38 - MEN'S RESTROOM
- 39 - WOMEN'S RESTROOM
- 40 - DISPLAY ROOM

- LOBBY
- AQUARIUM
- STAFF WORKSPACES
- STAIR TOWERS
- RESTARAUNT
- HOTEL ROOMS
- SPA
- AUDITORIUM



- 41 - TANK MAINTENANCE
- 42 - GIFT SHOP
- 43 - ATRIUM
- 44 - TANK MAINTENANCE
- 45 - ACCLIMATION TANK
- 46 - AMPITHEATER

**Key Species Legend**

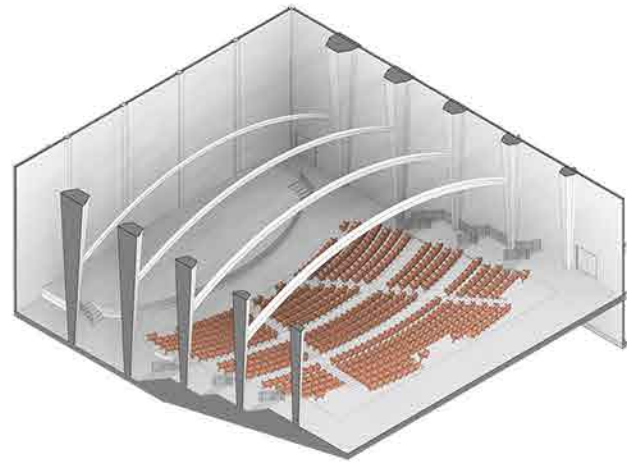





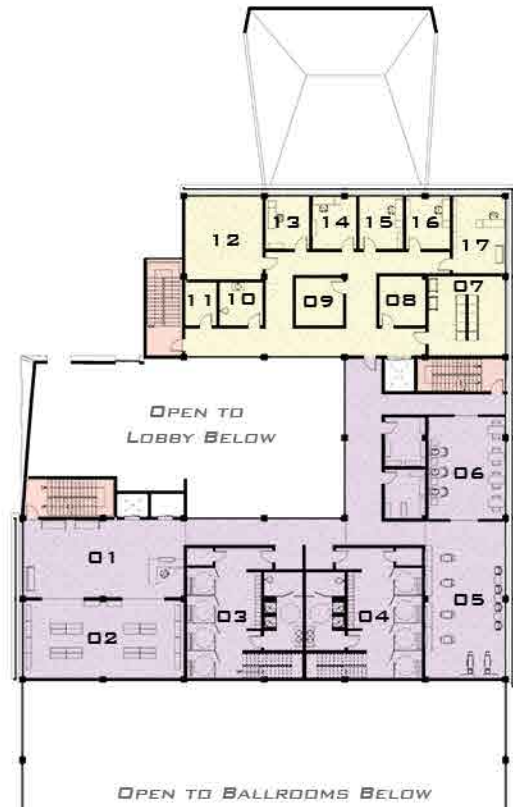
# FLOOR PLANS & DIAGRAM



VIEW FROM DOUBLE-DOUBLE SUITE



AUDITORIUM DIAGRAM

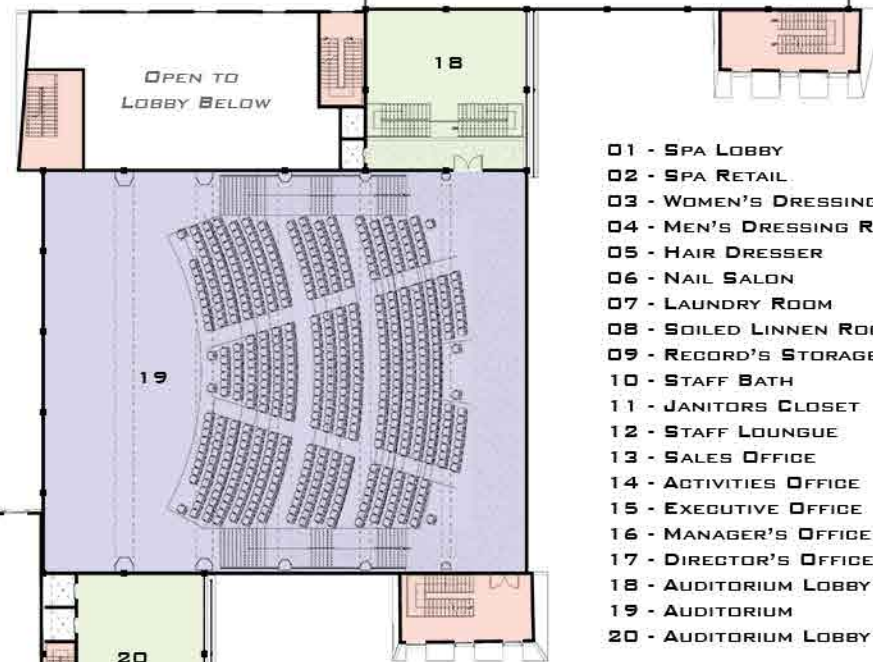


- LOBBY
- AQUARIUM
- STAFF WORKSPACE
- STAIR TOWERS
- RESTAURANT
- HOTEL ROOMS
- SPA
- AUDITORIUM

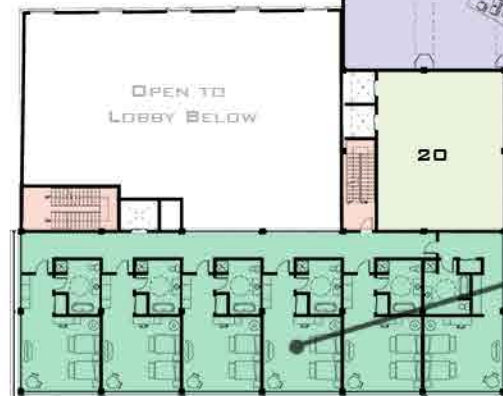
- 01 - RECEPTION
- 02 - MASSAGE ROOM
- 03 - WOMEN'S BATHROOM
- 04 - MEN'S BATHROOM
- 05 - WAITING ROOM
- 06 - HELIPAD
- 07 - LOBBY
- 08 - MUD TREATMENT ROOM
- 09 - OUTDOOR TANNING & POOL
- 10 - WAITING ROOM
- 11 - BRUNCH NOOK
- 12 - WAITING ROOM
- 13 - JANITORS CLOSET
- 14 - COUPLES MASSAGE



SIXTH FLOOR PLAN



- 01 - SPA LOBBY
- 02 - SPA RETAIL
- 03 - WOMEN'S DRESSING ROOM
- 04 - MEN'S DRESSING ROOM
- 05 - HAIR DRESSER
- 06 - NAIL SALON
- 07 - LAUNDRY ROOM
- 08 - SOILED LINEN ROOM
- 09 - RECORD'S STORAGE
- 10 - STAFF BATH
- 11 - JANITORS CLOSET
- 12 - STAFF LOUNGUE
- 13 - SALES OFFICE
- 14 - ACTIVITIES OFFICE
- 15 - EXECUTIVE OFFICE
- 16 - MANAGER'S OFFICE
- 17 - DIRECTOR'S OFFICE
- 18 - AUDITORIUM LOBBY #1
- 19 - AUDITORIUM
- 20 - AUDITORIUM LOBBY #2



FIFTH FLOOR PLAN



DOUBLE DOUBLE SUITE FLOOR PLAN



# TYPICAL SUITES FLOOR PLAN





# ZOO LAYOUT & RENDERINGS



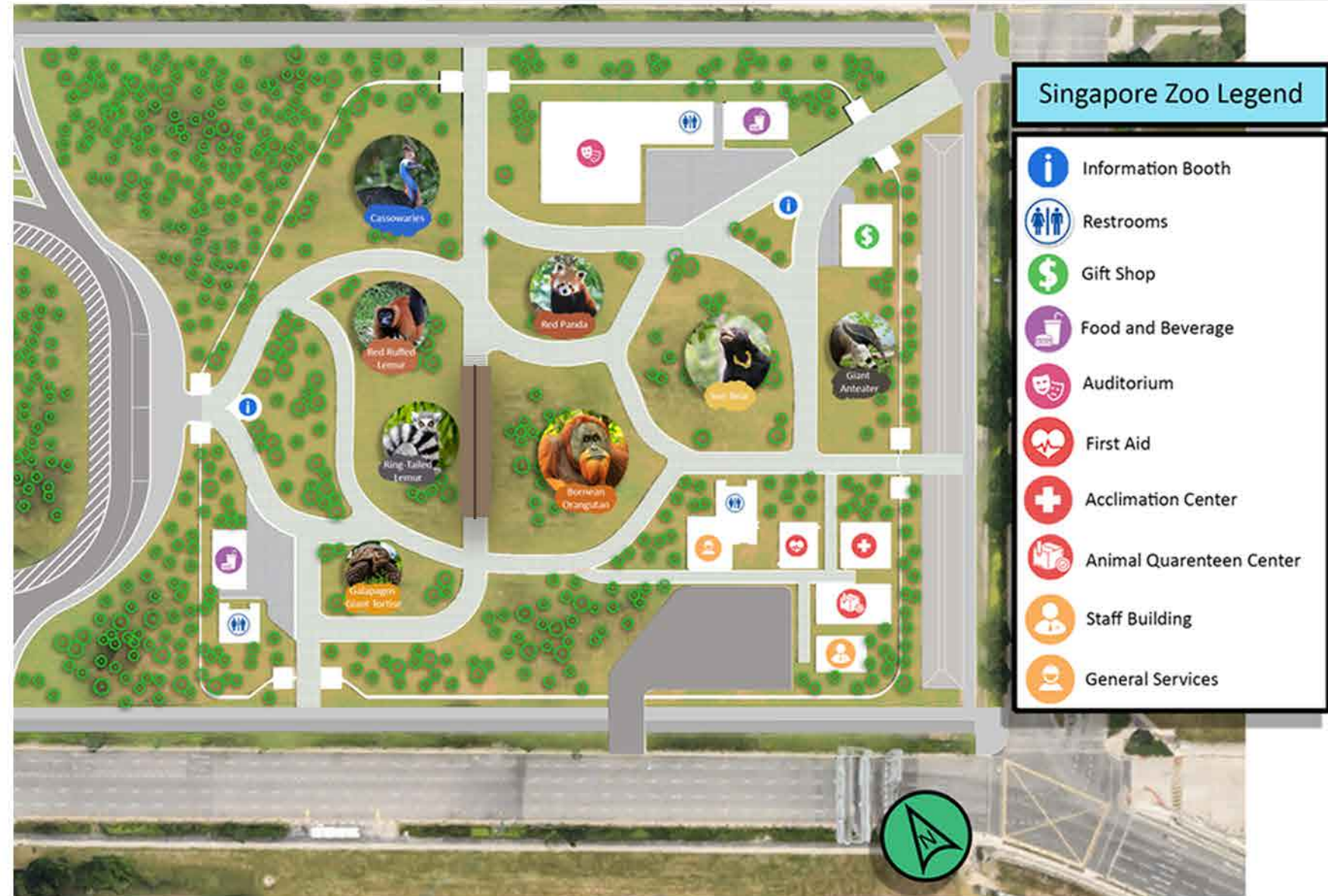
VIEW INTO LEMUR EXHIBIT



VIEW OF ORANGUTANG EXHIBIT



VIEW FROM PEDESTRIAN BRIDGE



## ZOO DESIGN APPROACH

I DECIDED TO DELEGATE TWO-THIRDS OF THE SITE TO THE ZOO. BETWEEN THE RESORT AND THE ZOO, A ROUND-ABOUT CAN BE FOUND WITH BUS DROP OFF ZONES ON EITHER END. I WANTED TO HAVE A MULTITUDE OF ENTRIES AND EXITS TO ALLOW FOR PEDESTRIANS TO ENTER THE ZOO FROM MULTIPLE SOURCES, THE MAJORITY OF PEOPLE WILL APPROACH FROM THE NORTHEAST BECAUSE OF THE MASS RAPID TRANSIT HUB NEARBY. A STAFF WING ON THE SOUTH EAST IS SCREENED BY LANDSCAPE. WINDING PATHS LEAD VISITORS AROUND THE ZOO AND ENCOURAGE VISITORS TO EXPLORE THE PARK.