

HSPV 72 I

## Capstone Studio: Materials + Materialities

Crescent building analysis and Visitor Center design proposals Report  
Talesin West, Scottsdale, AZ

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Master of Science in Historic Preservation, University of Pennsylvania





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# Crescent Housing : Statement Of Significance

Taliesin West, the winter “camp” and studio of the architect Frank Lloyd Wright, is a UNESCO World Heritage Site known for being a preeminent example of Wright’s innovation and development of organic architecture. Located in Scottsdale, AZ the site is designed in forms and materials that provide a sustainable ecosystem in which the boundaries between nature and built-form are dissolved. Beginning in 1938, over 500 apprentices resided and were taught here throughout Wright’s lifetime. Following Wright’s death, a group of Wright’s former apprentices created the Taliesin Associated Architects (TAA), which attempted to further Wright’s organic design principles under the guidance of Olgivanna Lloyd Wright in 1959, and was followed by Wes Peters after Mrs. Wright’s death in 1985. Headquartered at Taliesin West, the TAA was led by over 14 principals who had all worked under Wright. As an active firm, the TAA developed a number of significant projects across the United States and around the world that are now seen as perpetuating Wright’s legacy. Along with the original work, the firm completed several of Wright’s unbuilt designs and undertook other expansion projects, such as the Arizona Biltmore hotel in Phoenix (few more projects, what projects are the most notable in the architectural canon j). These projects sought to redefine Wright’s ideas to the contemporary audience by employing modern building materials and construction techniques. One historically significant project among these is the Married Student Housing at Taliesin West, also known as the Crescent Building. The building was designed in 1987 by one of the senior apprentices John DeKoven Hill, who also taught at school. The building, designed in response to the growing housing needs on the site, is the last major construction at the site after Wright’s death. Located outside the historic core of the site, the building stands today in its own right as one the last surviving projects designed and executed by Taliesin Associated Architects before the firm was disbanded in the year 1992.

The Crescent Building is the only existing building designed by Taliesin Associated Architects at the Taliesin West site that utilizes a different material palette while achieving Wright’s principles of organic architecture. It embodies the influence of Frank Lloyd Wright as a teacher on the architect John DeKoven Hill, a principal of the TAA and lead architect of the Crescent, while also reflecting his exploration and practice of different design languages, new materials, and interest in drawing architectural inspiration from nature. The building is based on a semi-circular plan featuring a double roof inspired by the roof angel of the Campus buildings, notably Frank Lloyd Wright’s office and the Taliesin West drafting studio. The buildings material contrast to the rest

of the campus is significant for how it the architect’s different understanding and practices on organic architecture in 1987 which embrace more commercially available building materials such as plywood, 2x4 studs, enameled metal and fiber glass reinforced stucco.

By the end of the 1980s Taliesin West had undergone dramatic shifts as did the world of architectural pedagogy and design. Part of the Crescent building’s significance is how these shifts are represented directly and indirectly through the Crescent building’s presence at Taliesin West.

By the 1980s, the format of education at the now formally recognized Taliesin School of Architecture had changed dramatically from Frank Lloyd Wright’s idea of learning by doing which motivated him to found the fellowship as an antithesis to the traditional model of education.

The need for married student housing on the campus highlights the shift away from the provisional nature of students living full time in desert shelters and instead in more traditional housing arrangements. This shift moves in tandem with the curriculum and school structure which had been implemented bringing with it a new organizational structure that reflected the traditional degree granting university. The Crescent building also reflects a dramatic shift to construction at Taliesin West. With the incorporation of the campus into the City of Scottsdale construction was now monitored by building code. This new regulation marked a shift in architectural production and form on the campus. The materials of the crescent building differ from the typical tectonic of Taliesin West notably the Crescent building lacks desert masonry and is constructed of commercially available architectural materials. For 1987, this is nothing new but this is the first architectural work on the campus of Taliesin West which reflects Frank Lloyd Wright’s forms and design philosophy with commercial construction that represents the modern) American built landscape and material vocabulary.

In conclusion, the significance of the Crescent Building laid on three major values: the historical value that the building serves as the witness of the history, evolution and the growth of the Taliesin Apprenticeship; the architectural value that evokes the legacy of Frank Lloyd Wright’s design philosophy and echoes the aesthetic of Taliesin West campus itself; its social value reflects the change in the organizational structure and operational orientation of Taliesin School over time, from its initial stage to the time after Wright’s death and the relocation of the campus.

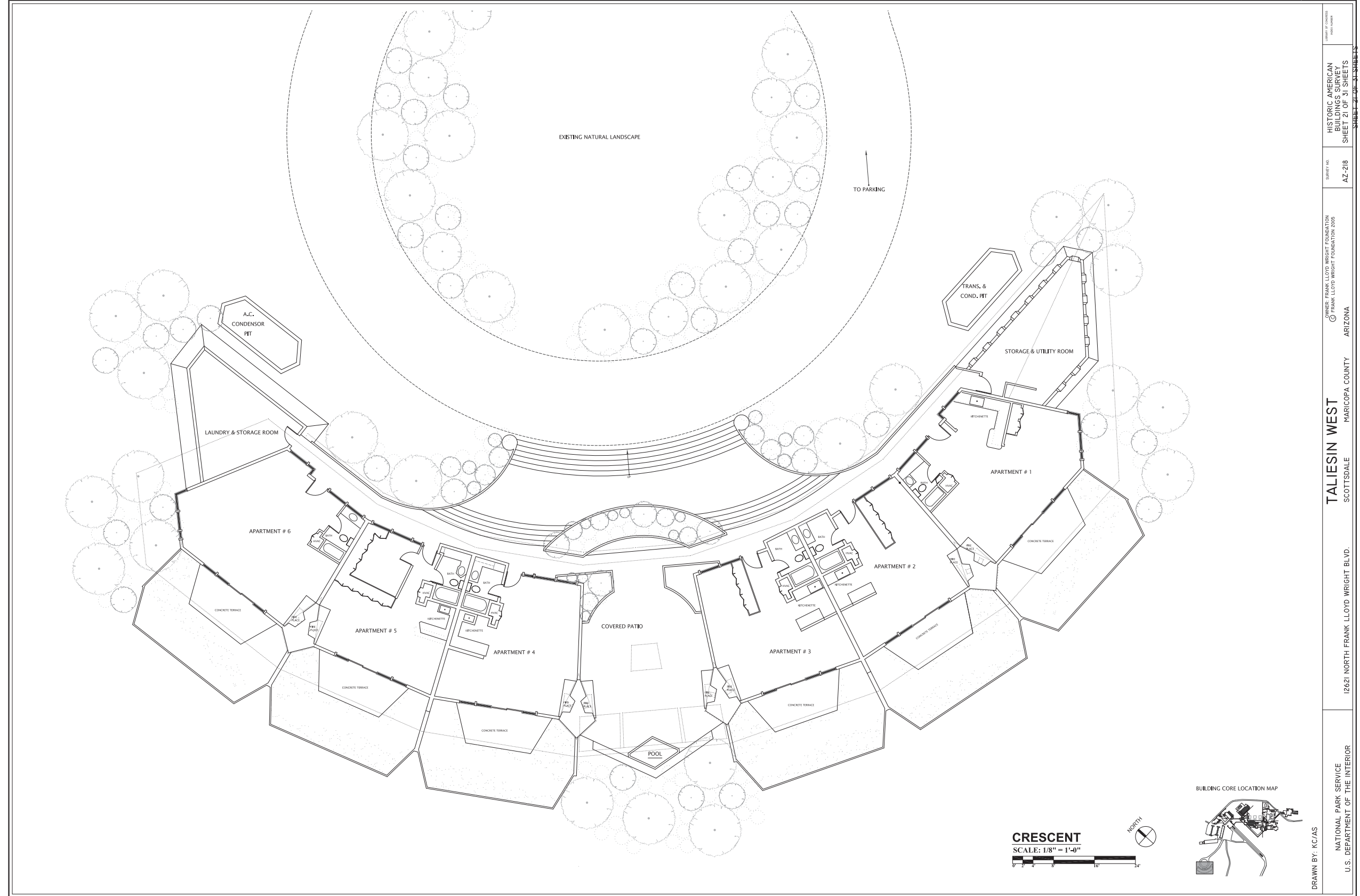


# Crescent Housing : Drawings

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TALIESIN WEST VISITOR CENTER  
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Miles Wu, Florence Wang



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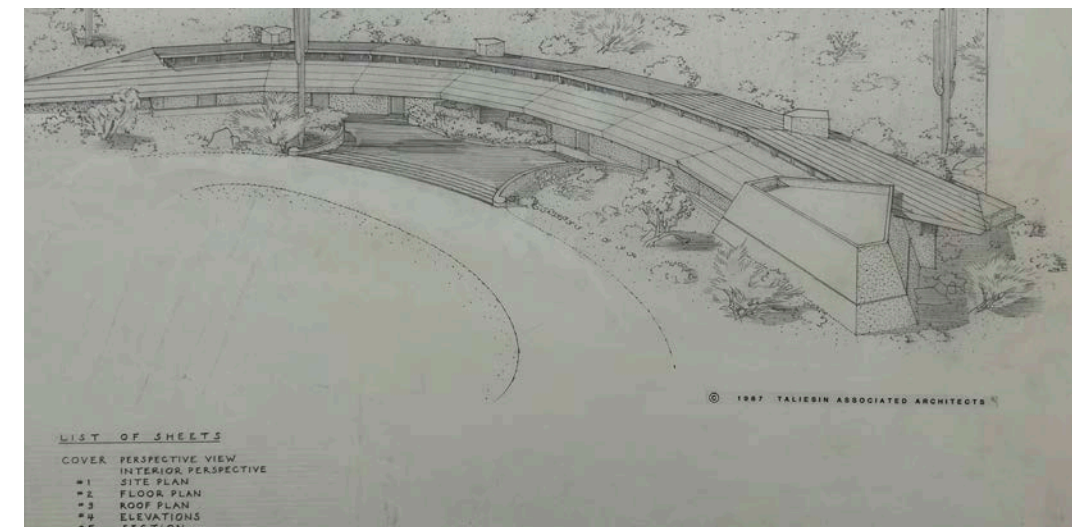
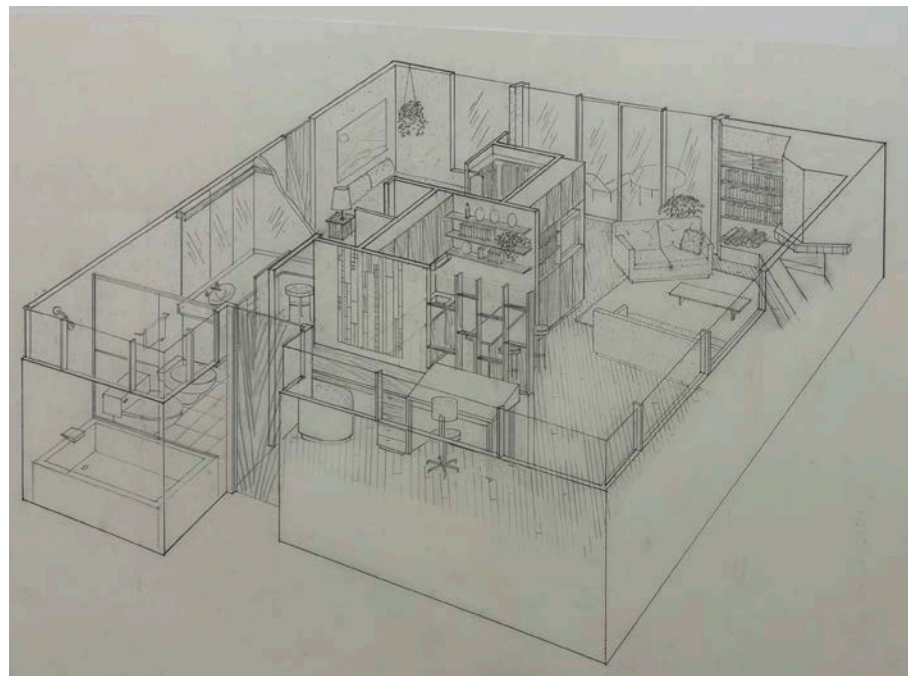
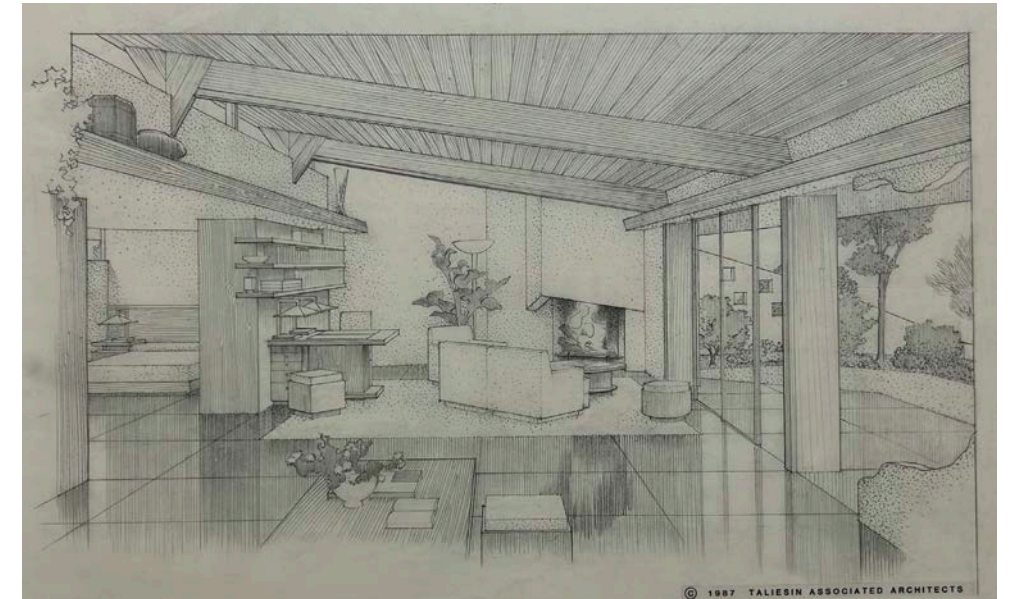
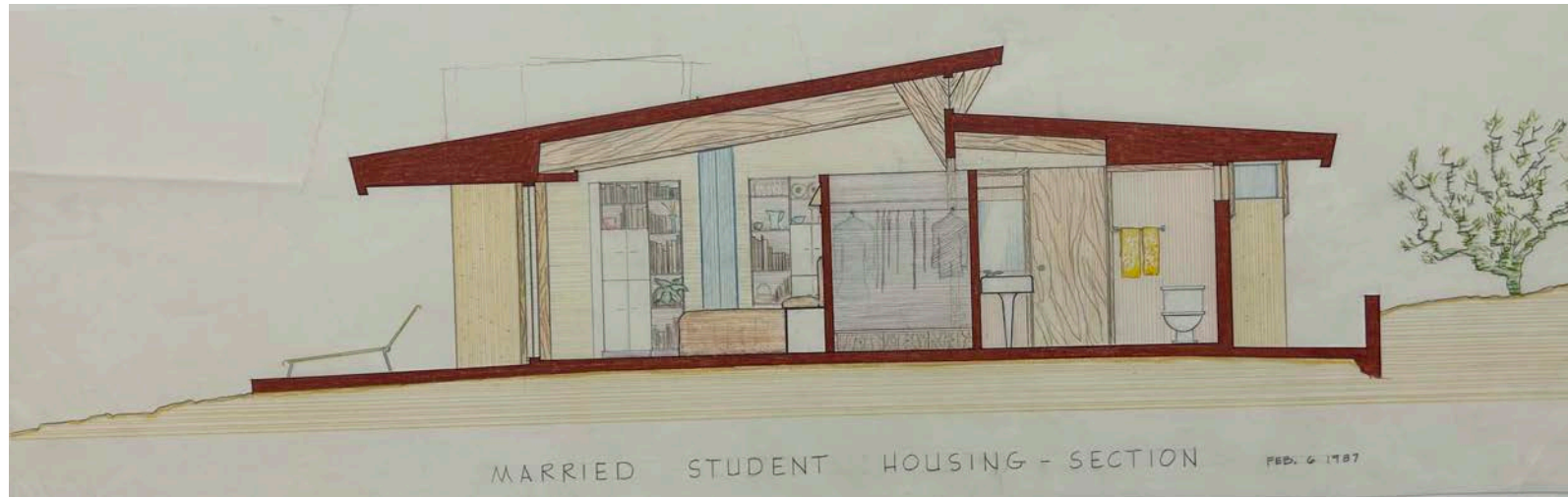
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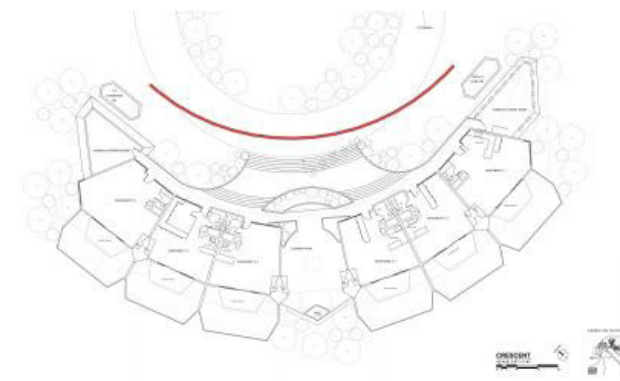
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12621 NORTH FRANK LLOYD WRIGHT BLVD. SCOTTSDALE, MARICOPA COUNTY, ARIZONA	TALIESIN WEST		
NATIONAL PARK SERVICE U.S. DEPARTMENT OF THE INTERIOR	DRAWN BY: KC/AS		

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# Crescent Housing : Drawings

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TALIESIN WEST VISITOR CENTER  
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## North Facade



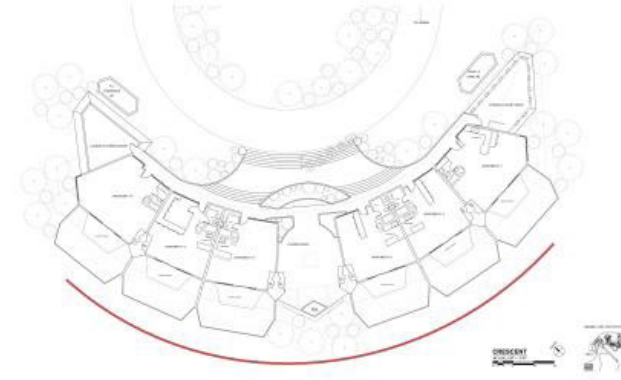
## North Facade



## North view from Crescent







## South Facade



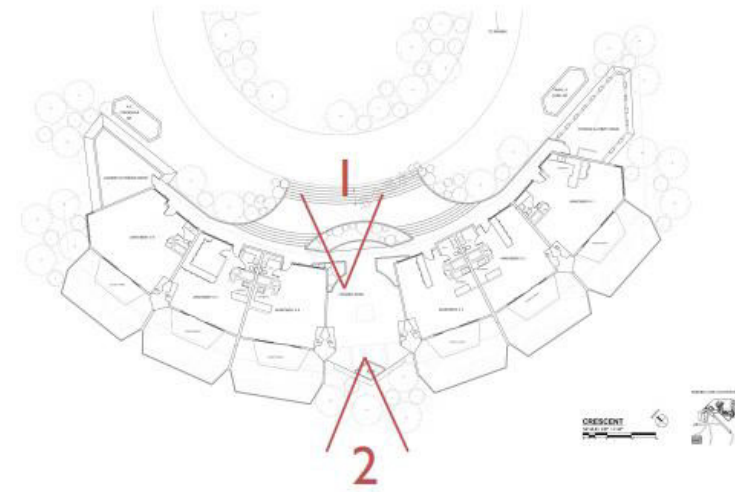
## South view from Crescent



# Site Circulation



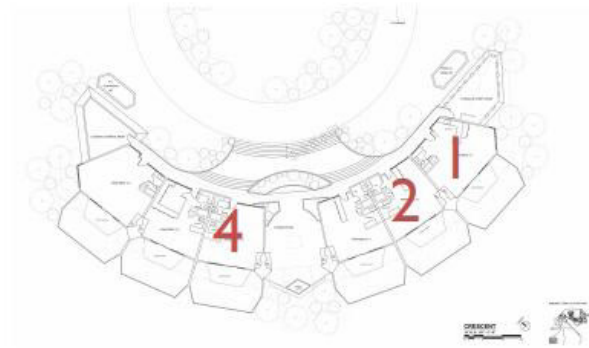
- Mountain
- Desert
- Transmition Tower



1 North View from Crescent

2 South View from Crescent





## Unit 1



## Unit 2



## Unit 4



# Site Circulation

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11 AM



2 AM

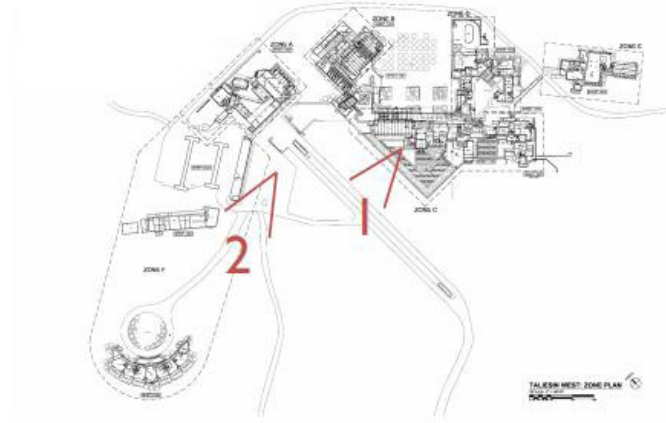


5 PM



# Site Circulation

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1 View from Main Campus

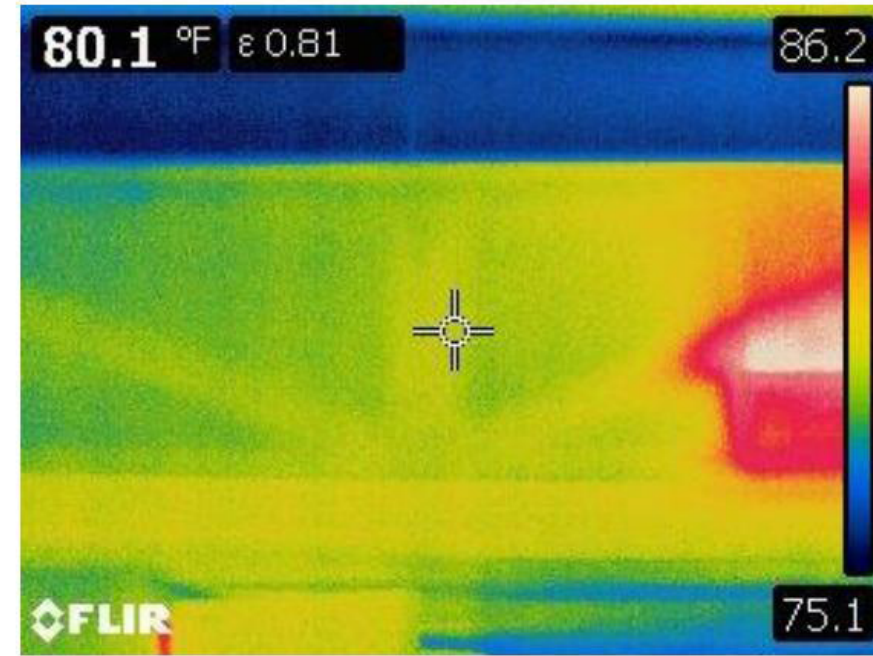


2 View from Guest Parking Area



# Constructional Analysis

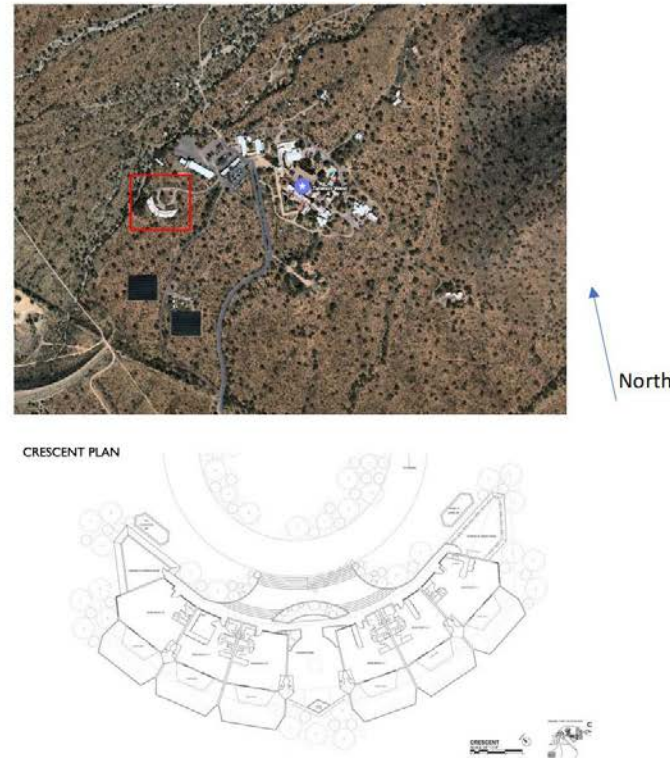
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## Crescent Student Housing.

The Crescent student housing was constructed at Taliesin West in 1987 for married students who had come to study at the Taliesin School of Architecture. The building is nestled into a natural slope in the landscape and is hemicycle shaped. The building is a wood frame structure enveloped in a cladding system of plywood, covered with insulation, chicken wire and fiberglass reinforced stucco on the exterior the roof is an A frame laminated with enamel coated metal, a clerestory runs the length of the build where the two diagonals of the roof come to a peak. The buildings center is oriented northeast, southwest .

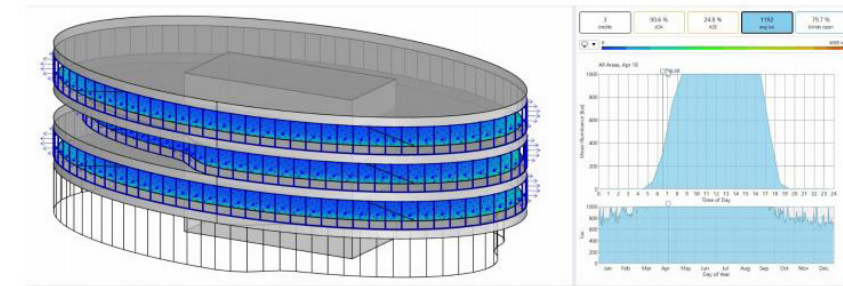


- The goal of this analysis is to understand with a limited range of time and access to data how efficiently the crescent building at Taliesin west performs over an average year of thermal conditions, with regards to daylighting and human thermal comfort.

## Software



Advanced daylighting, electric lighting, and conceptual thermal analysis.



- Climate Studio Developed by Solemma
- <https://www.solemma.com/climatestudio>
  - Software company based in Cambridge MA. Developed by building performance experts from Harvard and MIT.

### Our History

Solemma started as a summer project at Harvard's Graduate School of Design in 2008 under the guidance of Professor Christoph Reinhart. The goal was integration of validated environmental simulation engines, including Reinhart's pioneering DAYSIM research, with the digital tools design students were using in the studio like Rhino and the new parametric design interface of Grasshopper.

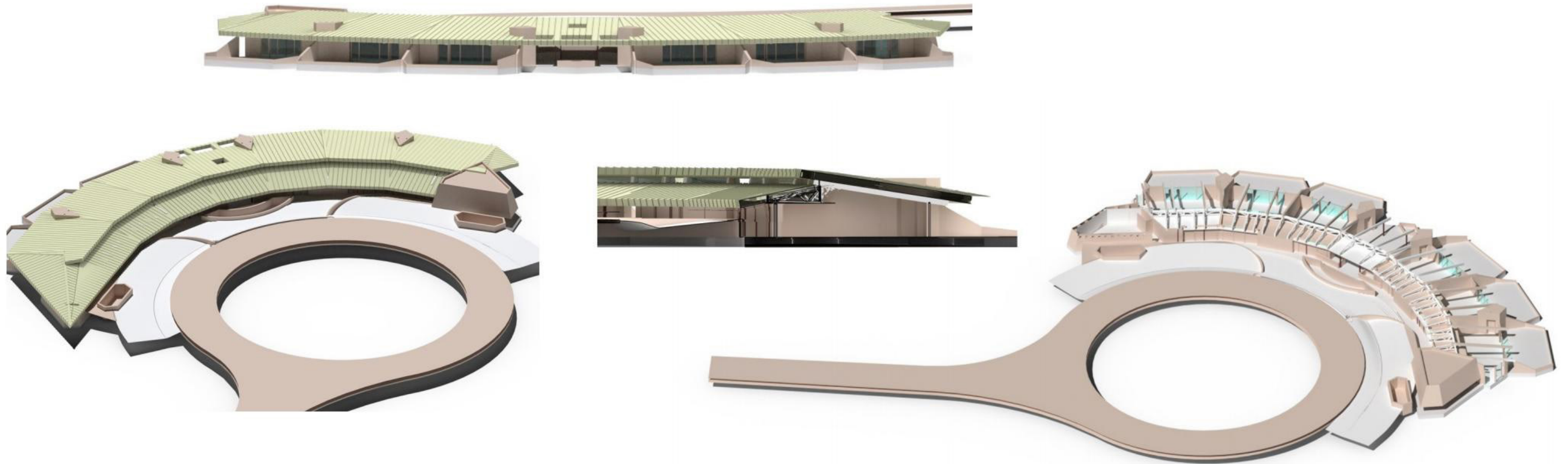
For over ten years we developed and shared this suite of tools called DIVA for Rhino with over 50,000 students, researchers, teachers and the top sustainable design and engineering firms world-wide. Over this time, key projects with industry partners have aligned our own research interests with new software solutions to dynamic façade modeling, cutting-edge glare simulations, and spectral ray tracing with our ALFA software.

In 2020 Solemma released its new flagship software called ClimateStudio after an intense two year collaboration with industry leaders. Beyond its immediate success as a fast and accurate solution for the AEC industry, the ClimateStudio platform is built to deploy future innovations, continuing our history of bridging academic research and industry needs.



# 3D Model

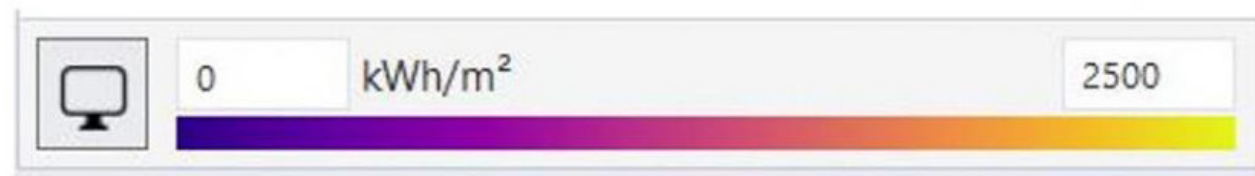
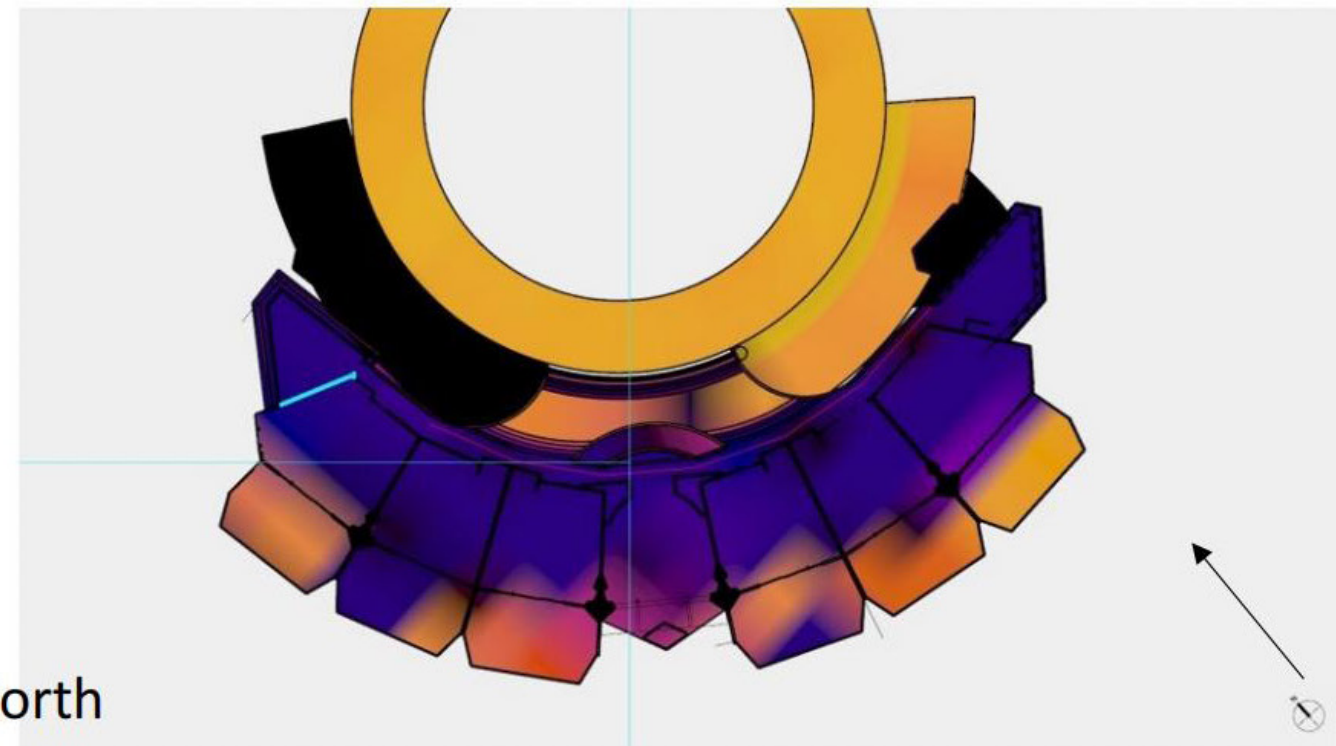
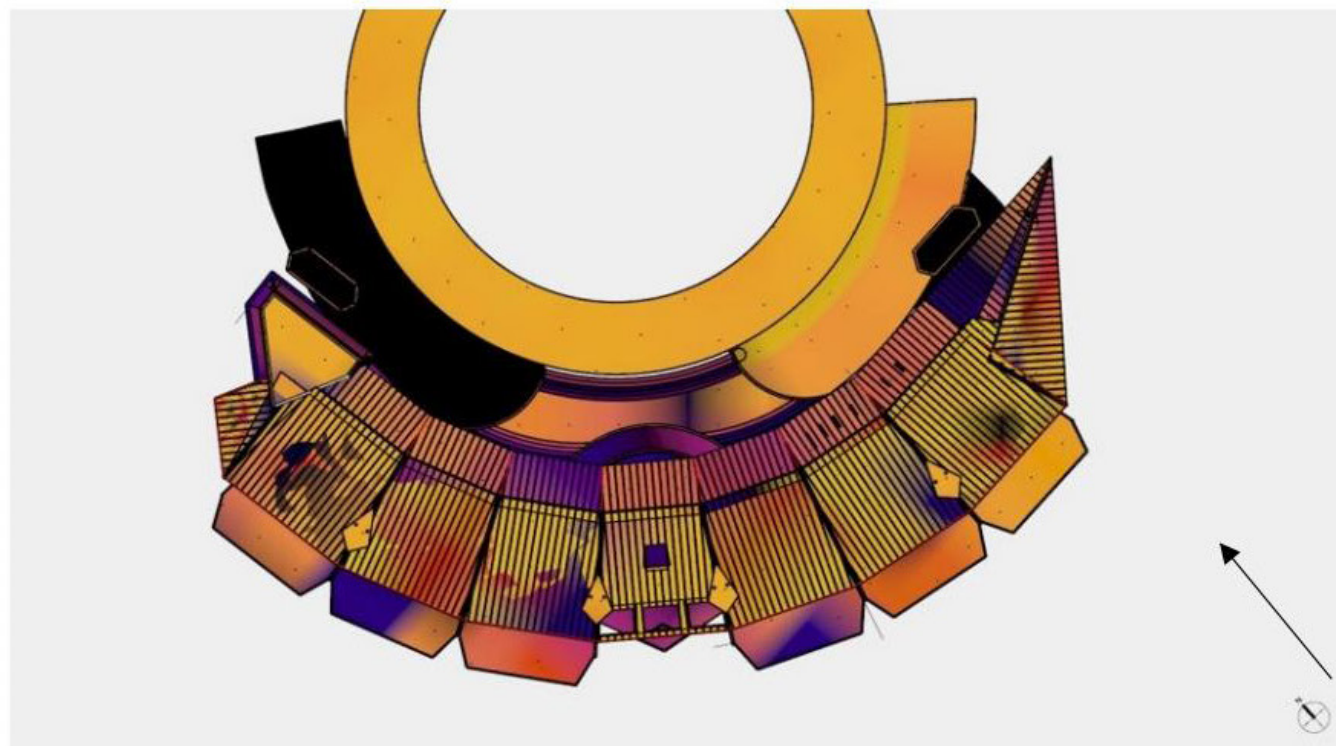
Reflects as accurately as possible the true material and tectonic conditions of the building.





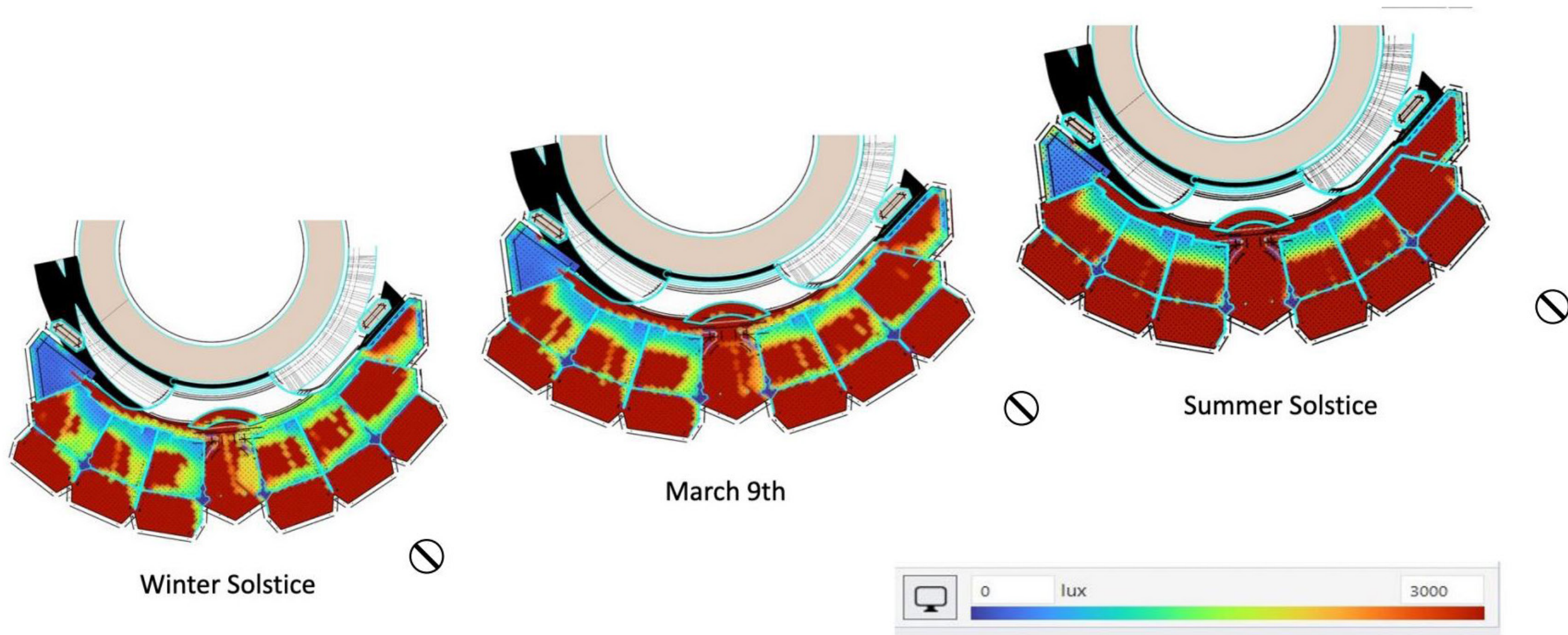


# Solar Radiance Map





# Day Lighting Map

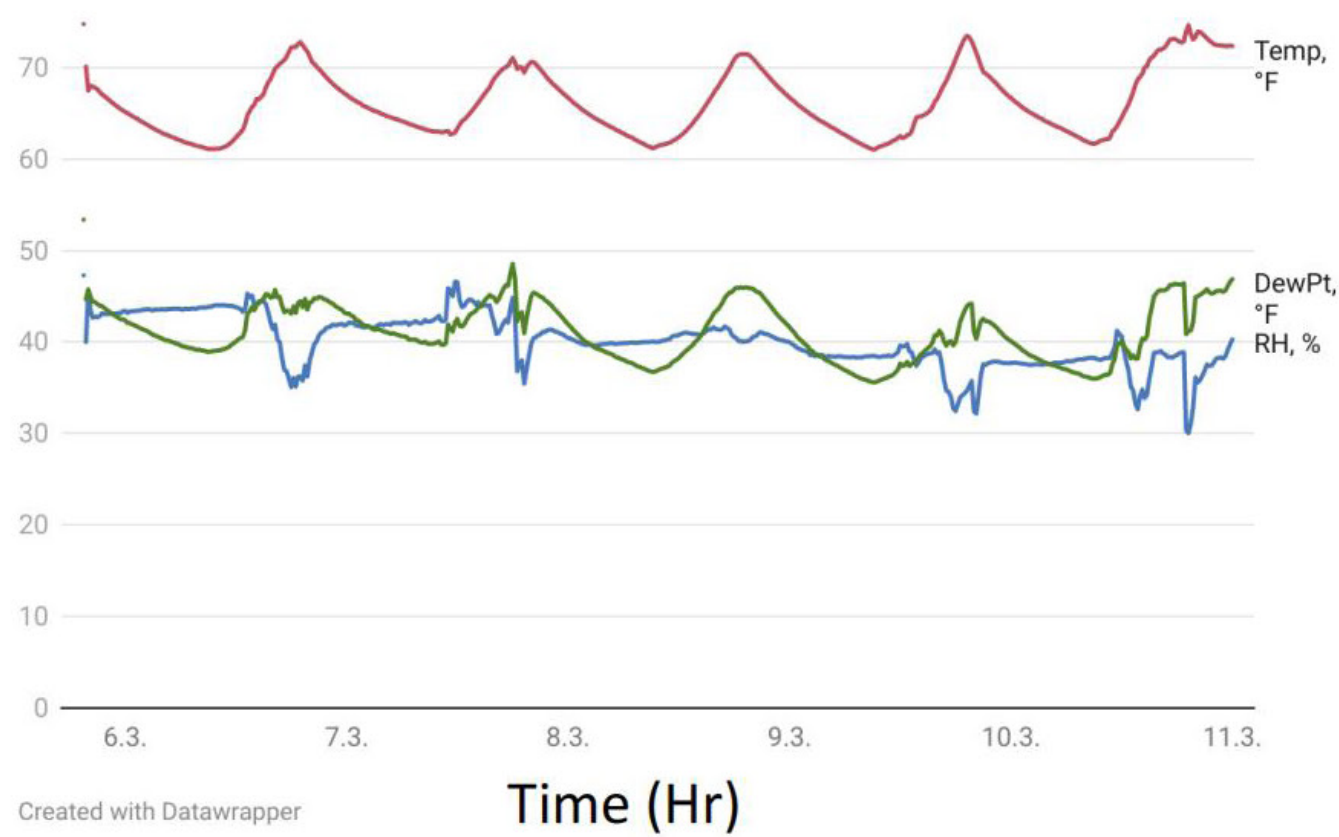




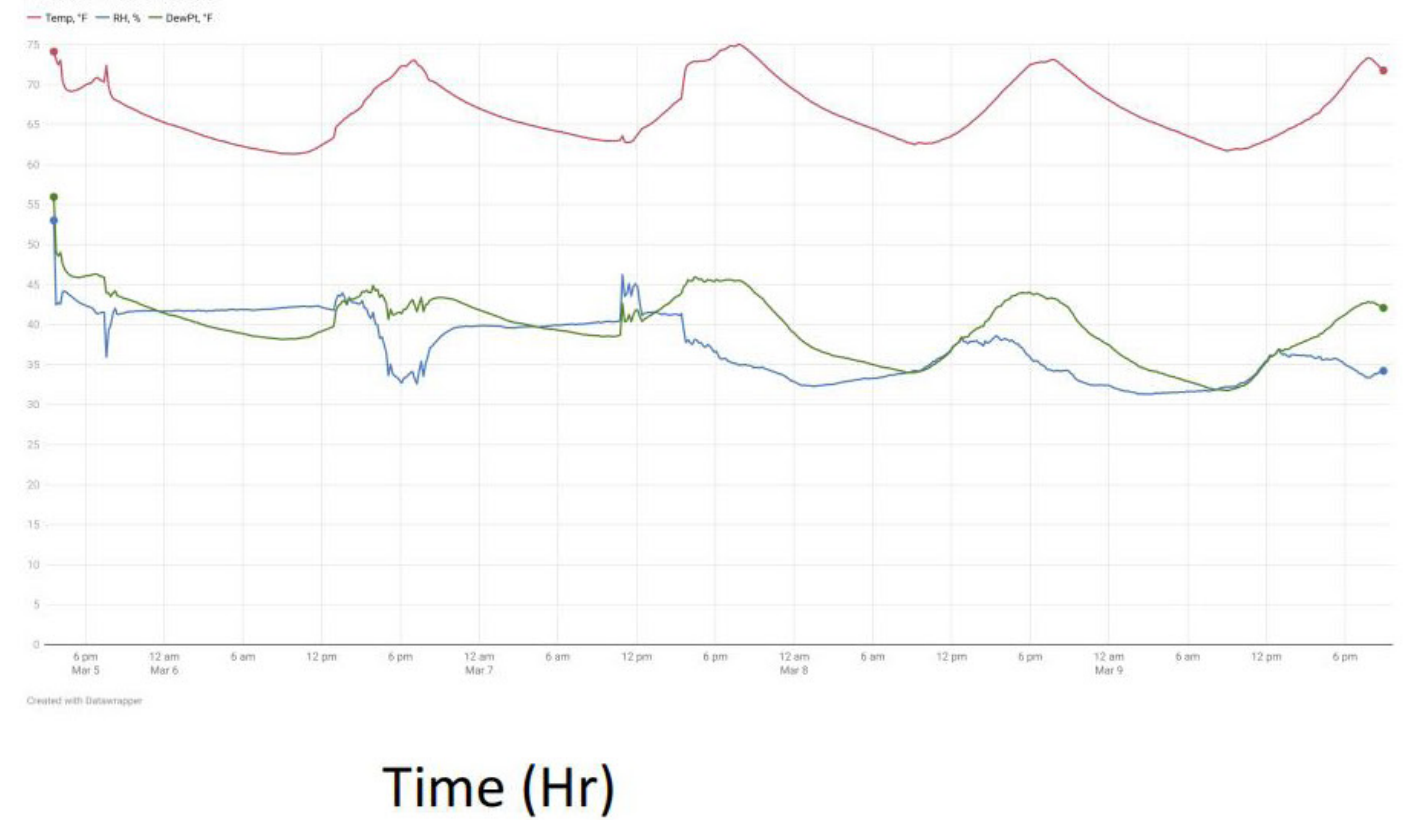
# HOBO meter: data collected on site

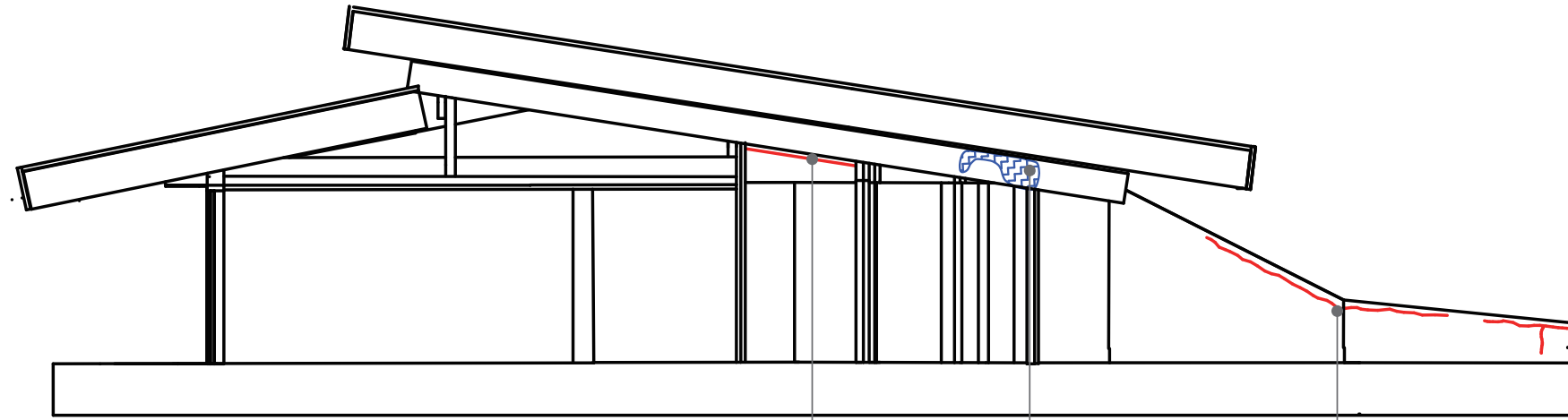
- Data Collected from March 5-9 2023 in an unconditioned interior environment.

**HOBO Meter Result 2**

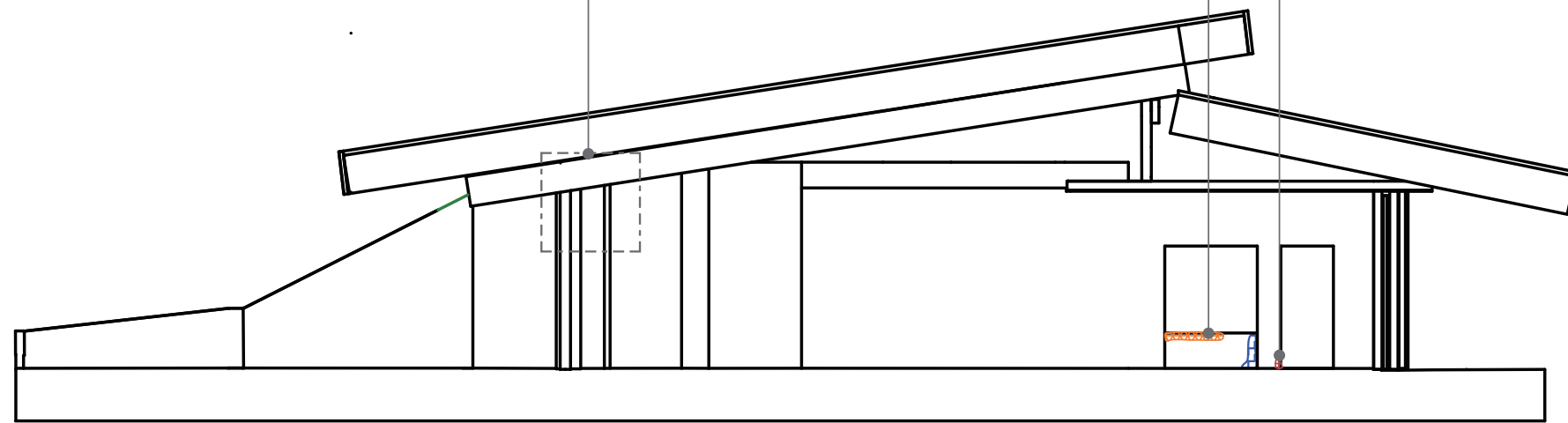
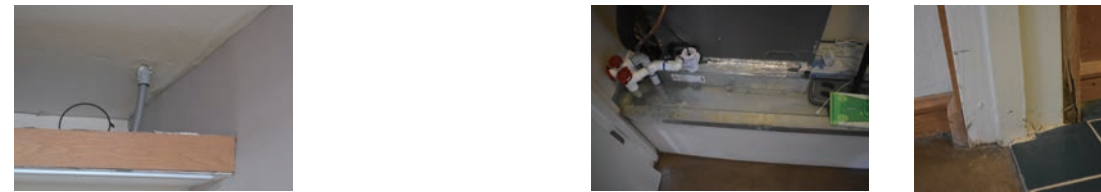
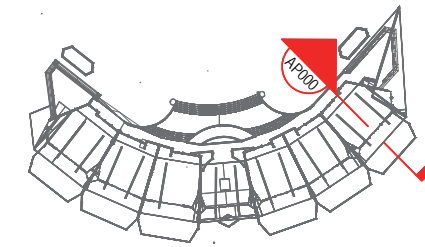


**HOBO Meter Results**



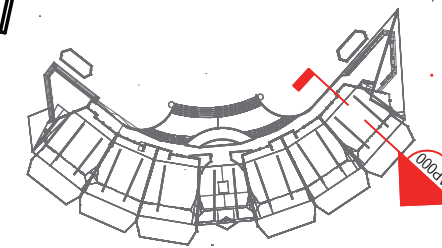


**03** UNIT 1 SECTION (LOOKING EAST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG



**04** UNIT 1 SECTION (LOOKING WEST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

Water infiltration is found on the end of the beam and its surroundings near the windows.



- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

HSPV 721 TALIESIN WEST:  
 MATERIALS AND MATERIALITIES  
 CAPSTONE STUDIO IN  
 HERITAGE CONSERVATION

WEITZMAN SCHOOL OF DESIGN  
 UNIVERSITY OF PENNSYLVANIA



SPRING 2023

STUDIO INSTRUCTORS:  
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 FRANK MATERO

**Capstone Studio: Taliesin West**  
 Cabaret Theater Historic Structural Report

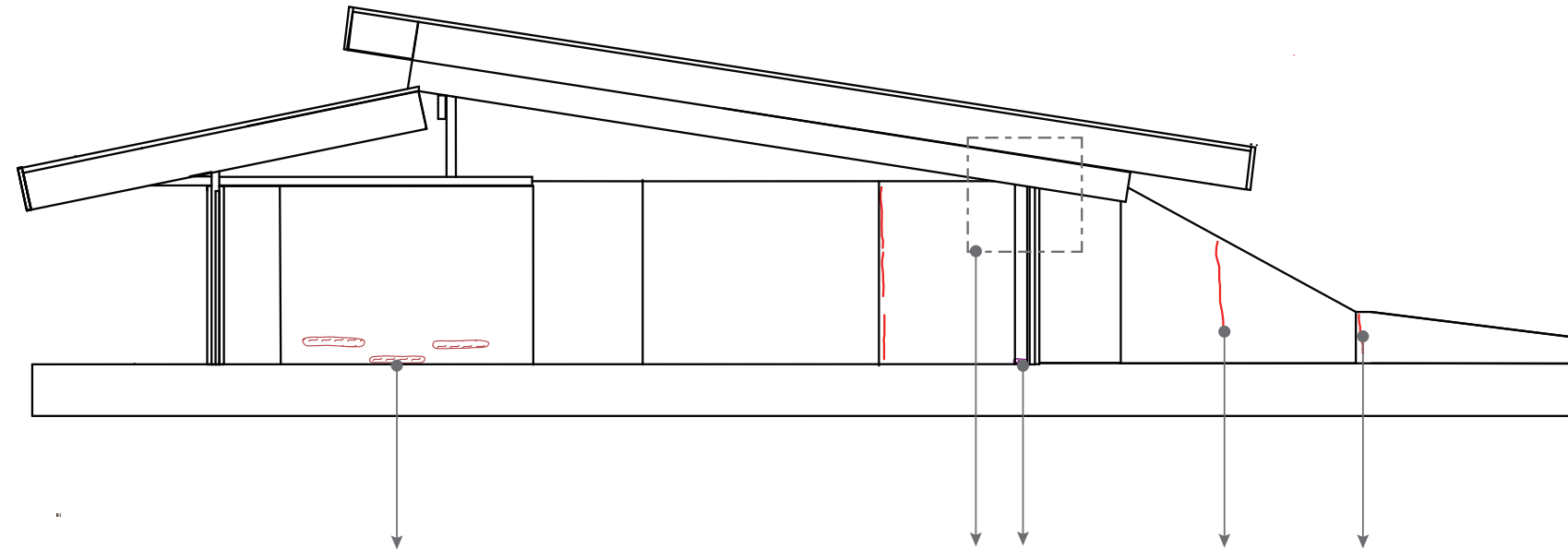
12621 N Frank Lloyd Wright Blvd,  
 Scottsdale, AZ 85259

Group Members:  
 DANIEL MANGONO  
 TAHA MUGHAL  
 FLORENCE (JUN-AJ) WANG  
 MILES (CHENGJUN) WU  
 DIYI ZHANG

UNIT 1 CONDITION

DRAWN BY: FLORENCE WANG  
 DATE: 4/9/2023  
 SCALE: NOT TO SCALE

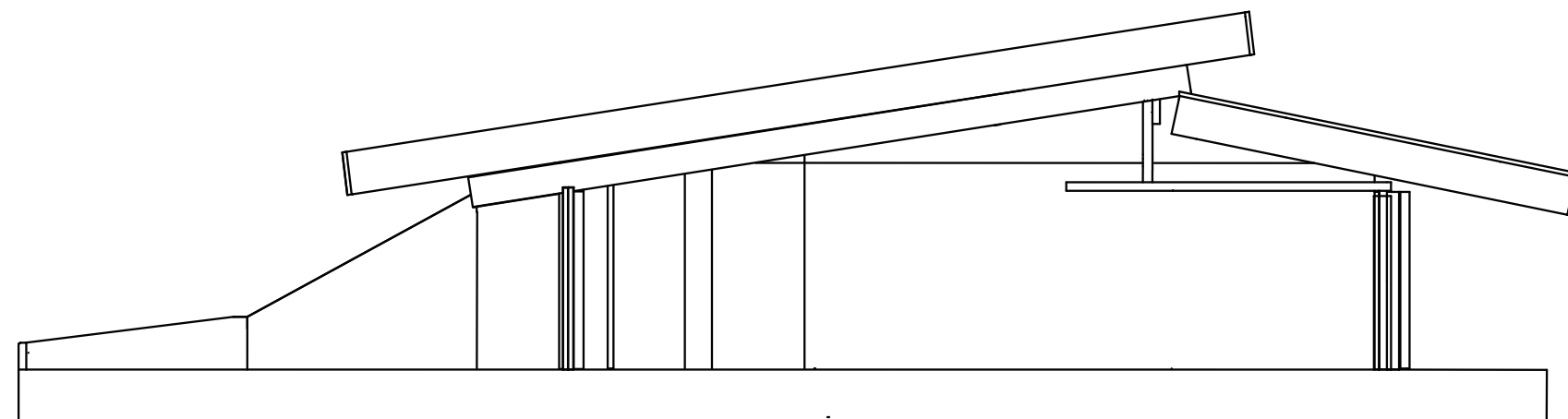
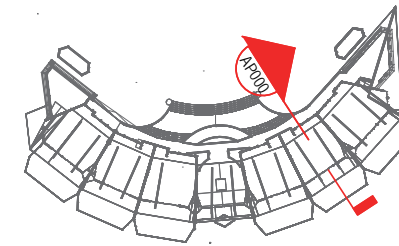
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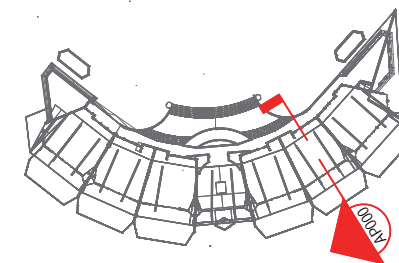
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 DRAWN BY: FLORENCE WANG

The horizontal ablation on the east wall of the room may be man-made.



## 06 UNIT 2 SECTION (LOOKING WEST)

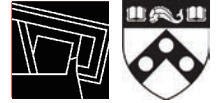
SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG



- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

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 Crescent Building Condition Report

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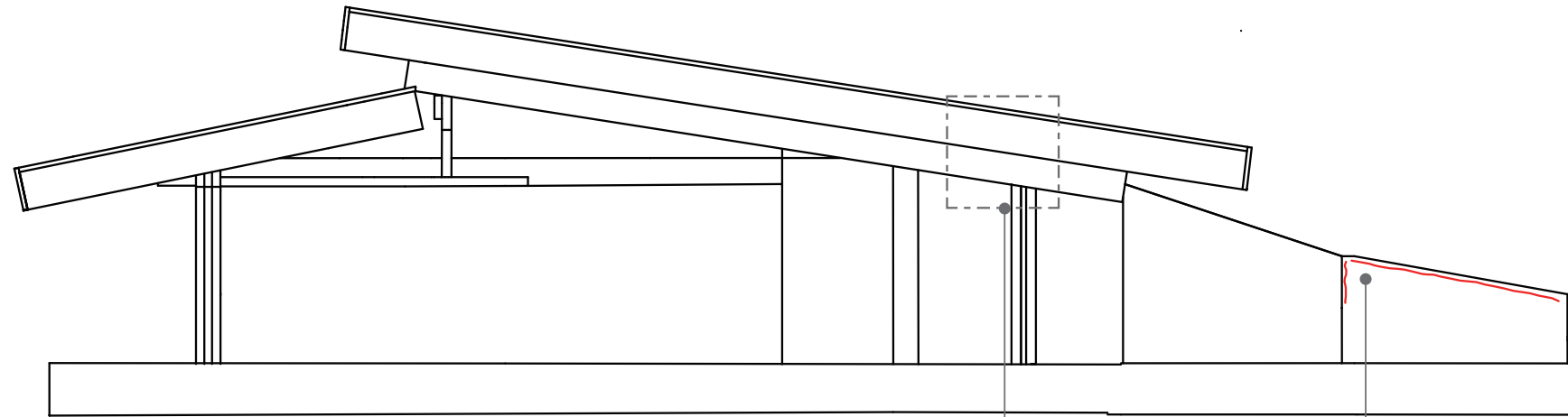
Group Members:

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 MILES (CHENGJUN) WU  
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UNIT 2 CONDITION

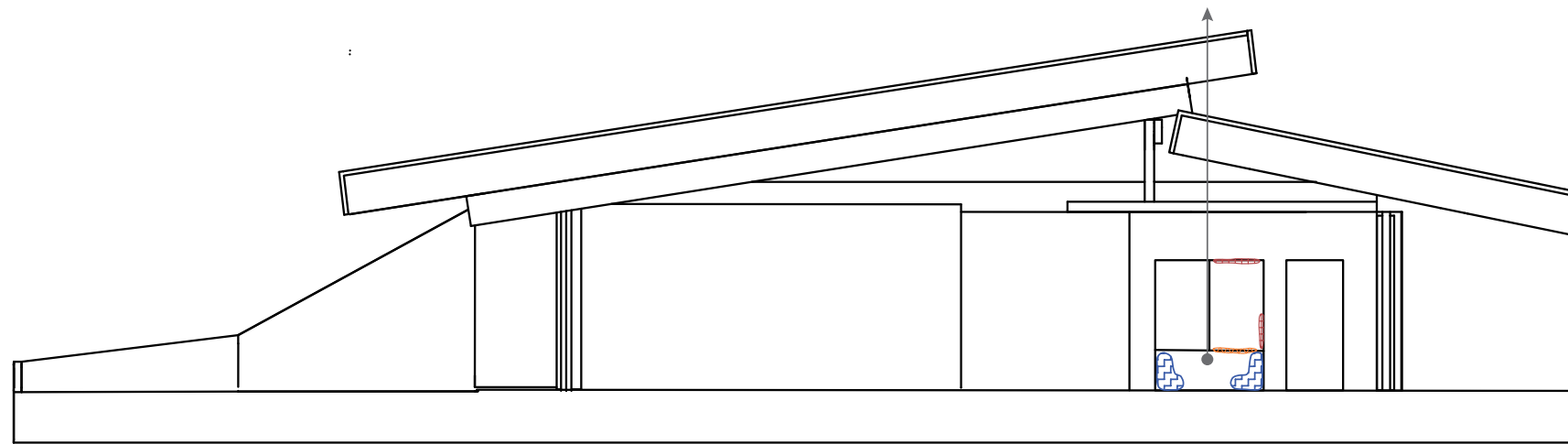
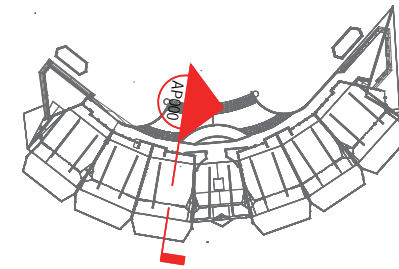
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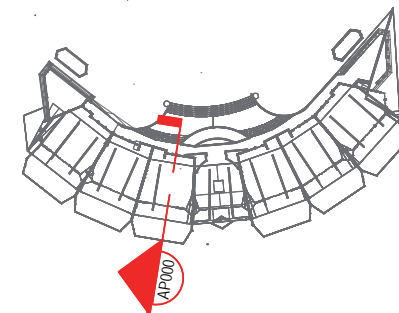
**07** UNIT 4 SECTION (LOOKING EAST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

Water infiltration occurs at the east-south corner between the ceiling and the walls.



**08** UNIT 4 SECTION (LOOKING WEST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

There might be pipe leaking problems around the mechanical room, causing water damage, and causes cracks, staining, flaking, missing materials, corrosion, and mold.



- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

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 SPRING 2023  
 STUDIO INSTRUCTORS:  
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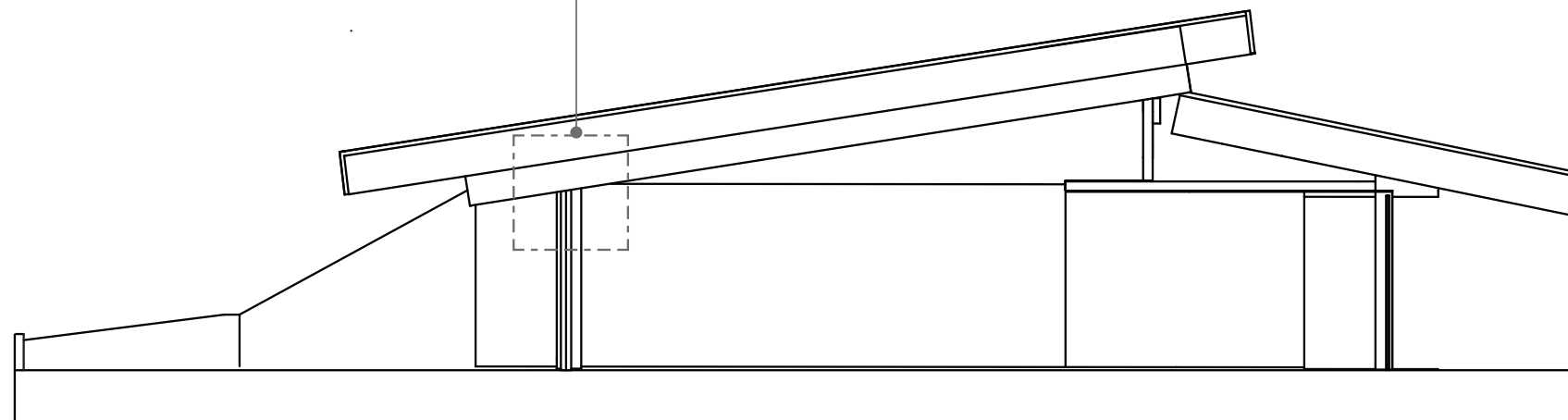
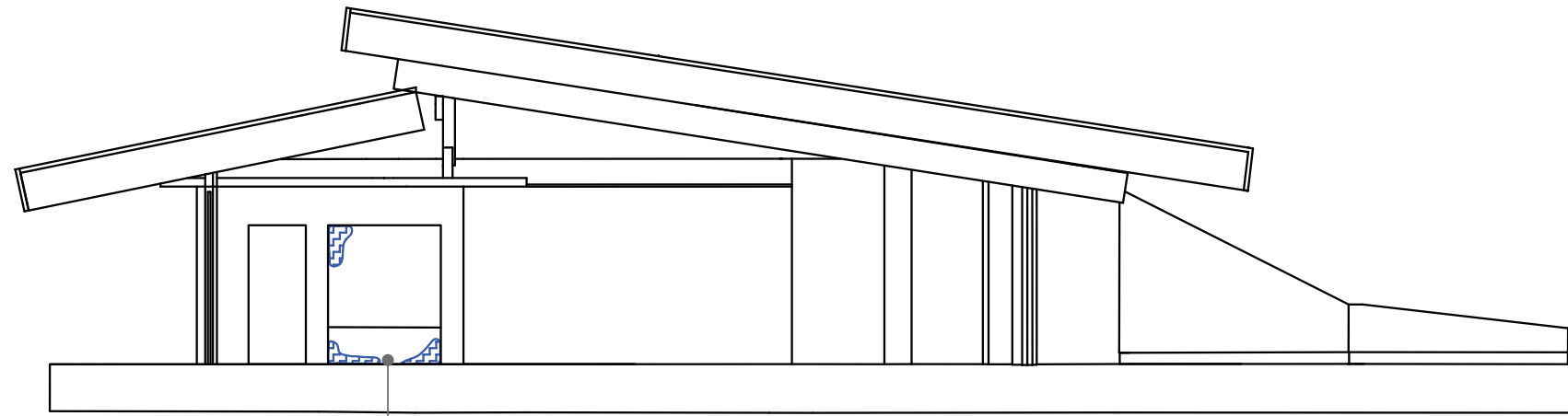
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UNIT 4 CONDITION

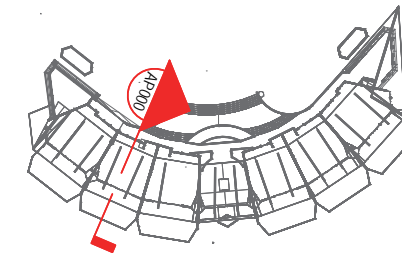
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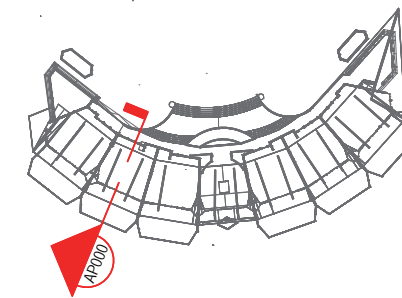
- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

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 DRAWN BY: FLORENCE WANG



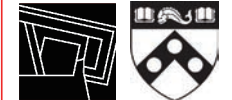
**10** UNIT 5 SECTION (LOOKING WEST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

Flaking, staining, and water infiltration occur at the southwest corner beneath the ceiling.



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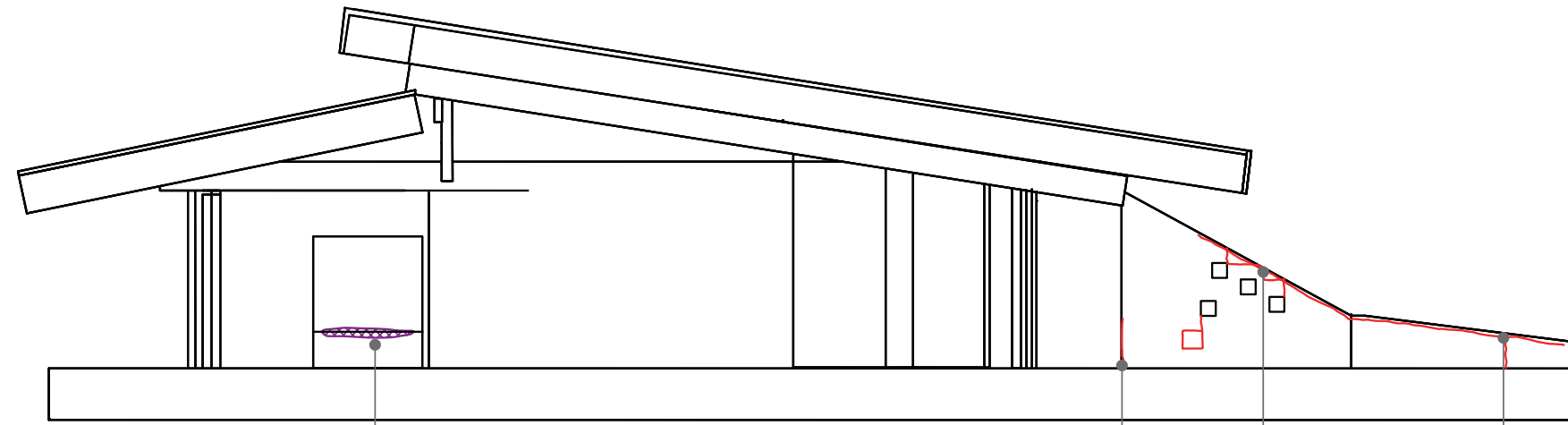
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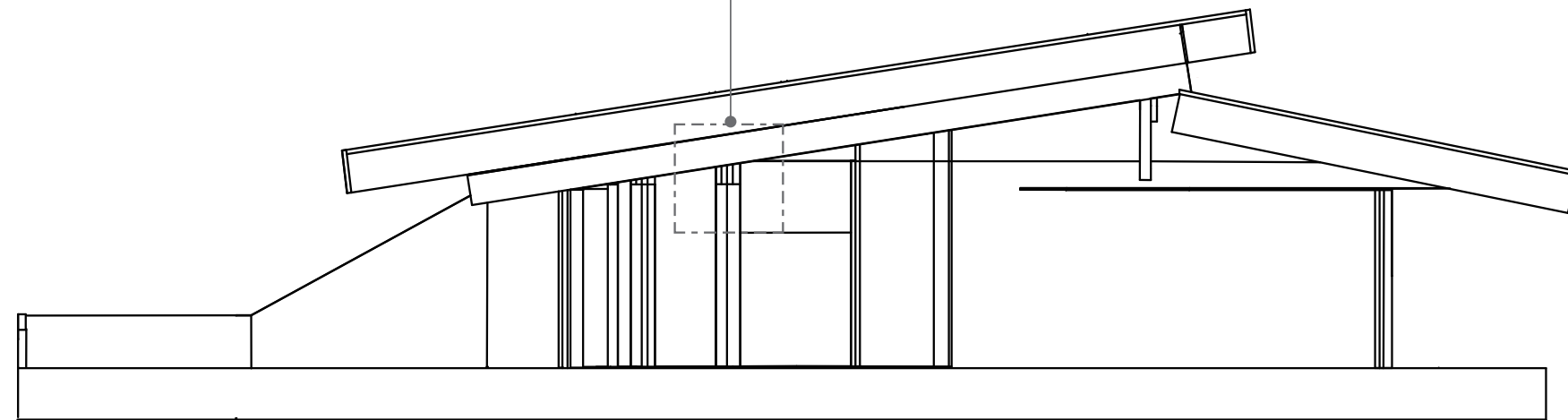
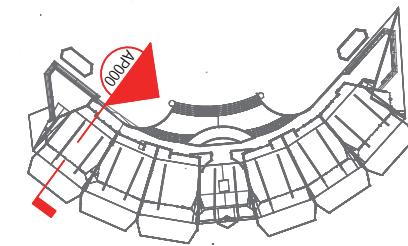
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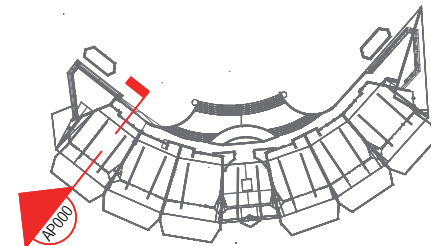
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**11** UNIT 6 SECTION (LOOKING EAST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG



**12** UNIT 6 SECTION (LOOKING WEST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG



- Crack
- Efflorescence
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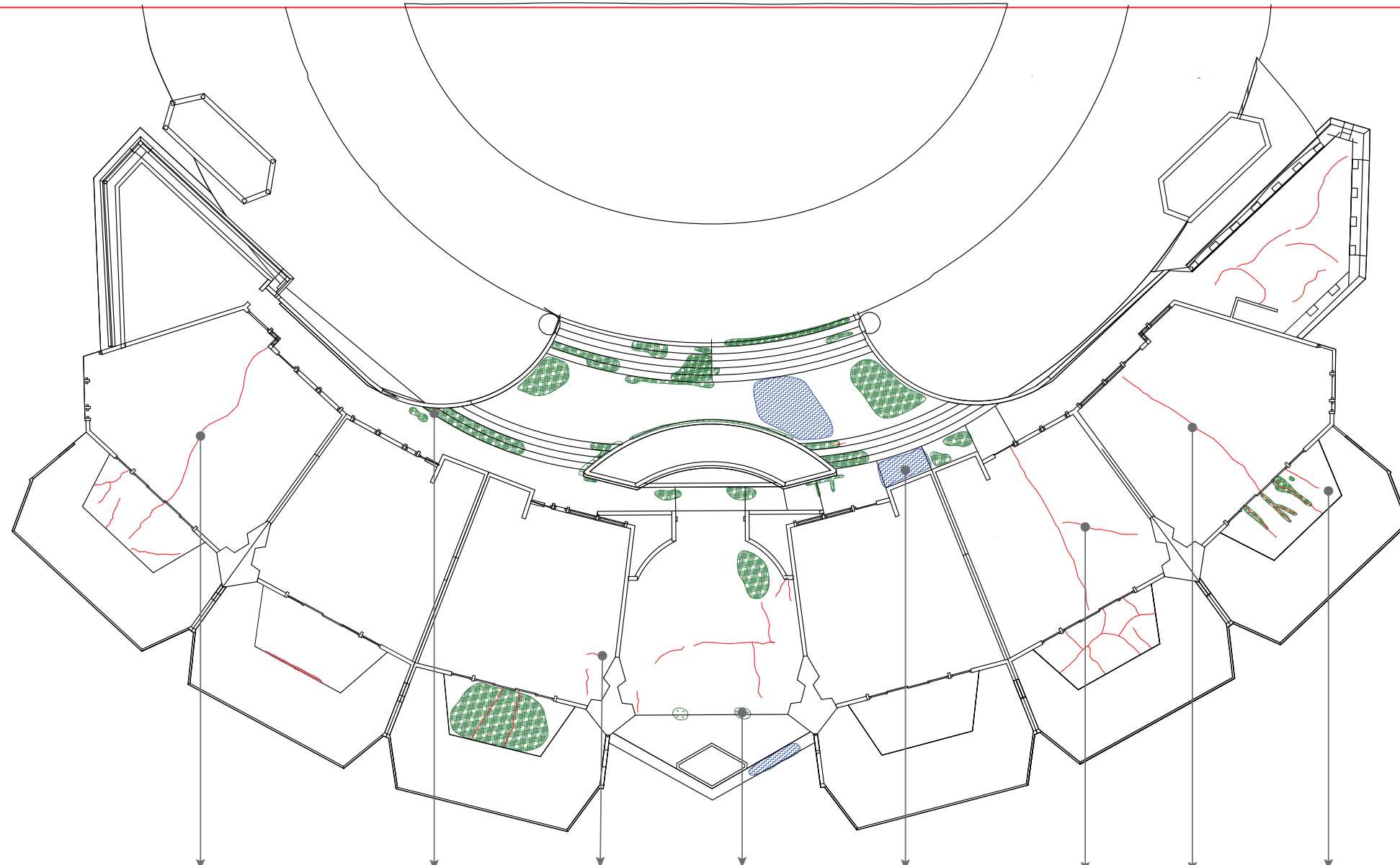
DANIEL MANGONO  
 TAHA MUGHAL  
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UNIT 6 CONDITION

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 DATE: 4/9/2023  
 SCALE: NOT TO SCALE

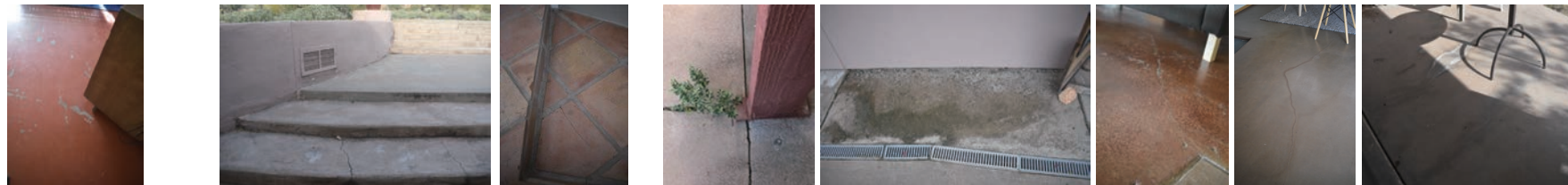
**A000**





**01 FLOOR CONDITION**  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

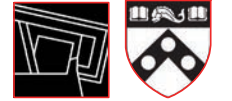
Most of the condition on the floor happens in outdoor areas, including the stairs, covered patio, and terrace of each unit. The condition is majorly related to water damage, such as efflorescence and water infiltration. In the indoor space, a few cracks can be observed on the floor, and some longer cracks extend throughout the terrace and indoor.



- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

HSPV 721 TALIESIN WEST:  
 MATERIALS AND MATERIALITIES  
 CAPSTONE STUDIO IN  
 HERITAGE CONSERVATION

WEITZMAN SCHOOL OF DESIGN  
 UNIVERSITY OF PENNSYLVANIA



SPRING 2023

STUDIO INSTRUCTORS:  
 IRENE MATTEINI  
 FRANK MATERO

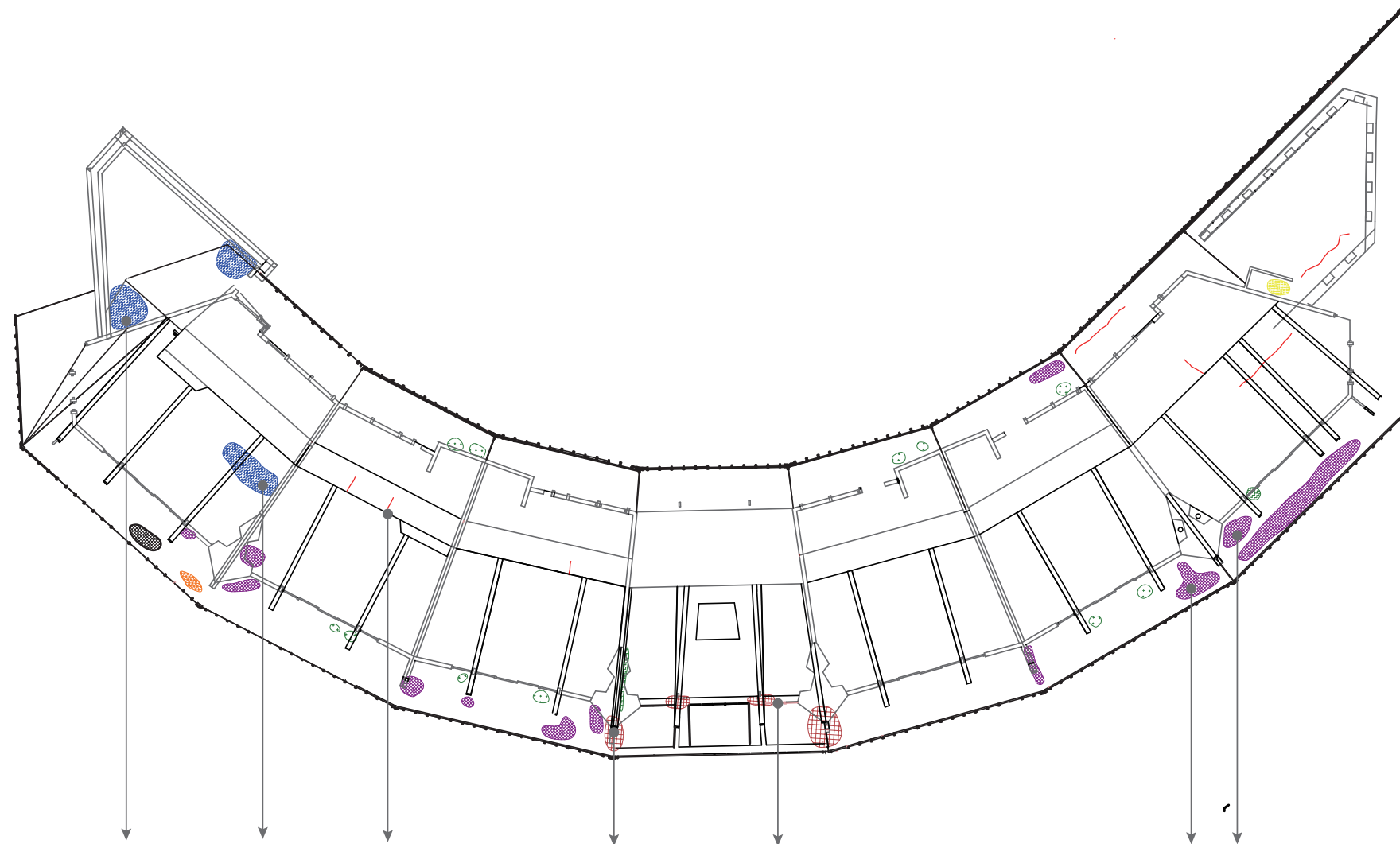
**Capstone Studio: Taliesin West**  
 Crescent Building Condition Report  
 12621 N Frank Lloyd Wright Blvd,  
 Scottsdale, AZ 85259

Group Members:

DANIEL MANGONO  
 TAHA MUGHAL  
 FLORENCE (JUN-AI) WANG  
 MILES (CHENGJUN) WU  
 DIYI ZHANG

FLOOR CONDITION

DRAWN: FLORENCE WANG  
 DATE: 4/9/2023  
 SCALE: NOT TO SCALE



**02 CEILING CONDITION**  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

Most conditions on the ceiling happen in outdoor areas, especially eaves on the terraces. The condition may be caused by moisture and lack of maintenance, leading to flaking, staining, and some biological growth. The water damage is most serious in the laundry room, with severe water infiltration on the exposed structure.

- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

HSPV 721 TALIESIN WEST:  
 MATERIALS AND MATERIALITIES  
 CAPSTONE STUDIO IN  
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WEITZMAN SCHOOL OF DESIGN  
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SPRING 2023

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 DIYI ZHANG

CEILING CONDITION

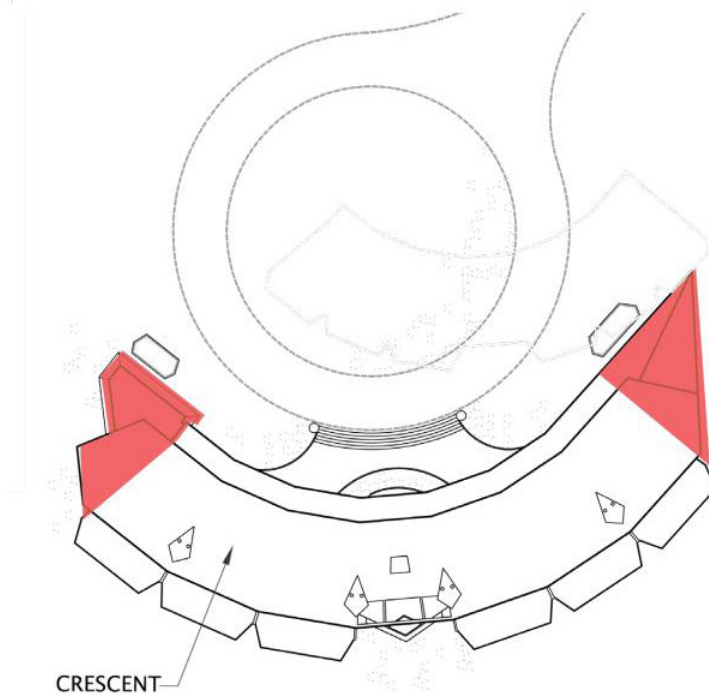
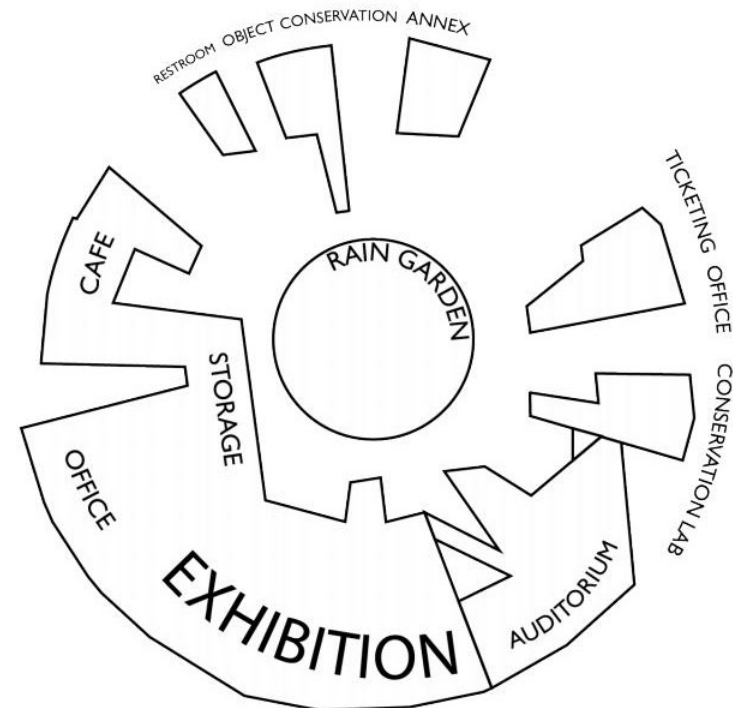
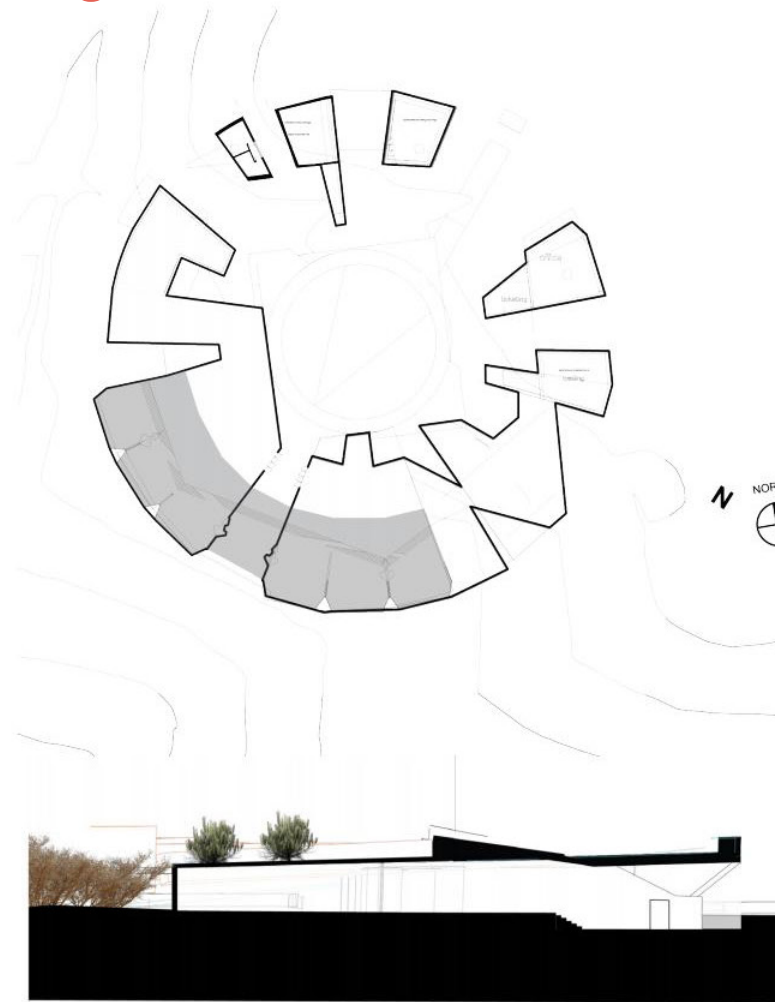
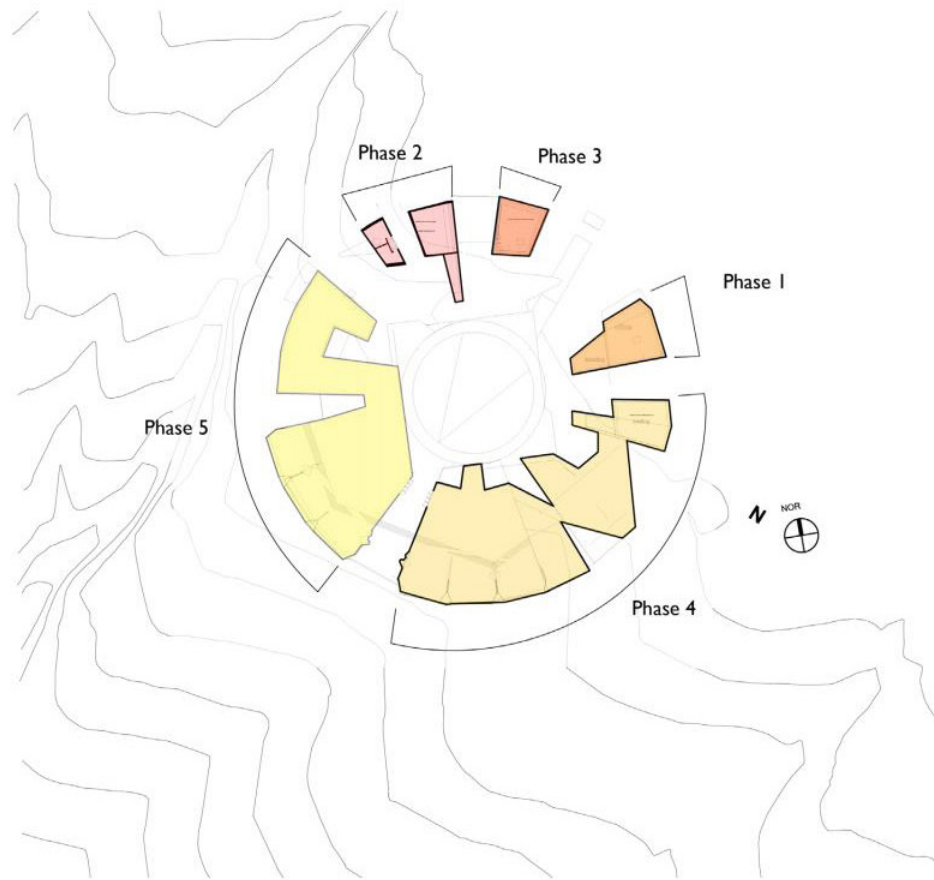
DRAWN BY: FLORENCE WANG  
 DATE: 4/9/2023  
 SCALE: NOT TO SCALE

**A000**

# Individual Design Proposal - Daniel Mangano

## Visitor Center for Taliesin West, Crescent x Wedge

HSPV 721 Capstone Studio: Materials + Materialities  
 TALIESIN WEST VISITOR CENTER  
 Daniel Mangano, Taha Mughal, Diyi Zhang,  
 Miles Wu, Florence Wang



This project proposes a visitor center for Taliesin West, Frank Lloyd Wright's winter home and studio in Scottsdale AZ. The plan for the center utilizes an existing building on the campus known as the crescent which was originally built as married student housing for the school of architecture which existed on the site.

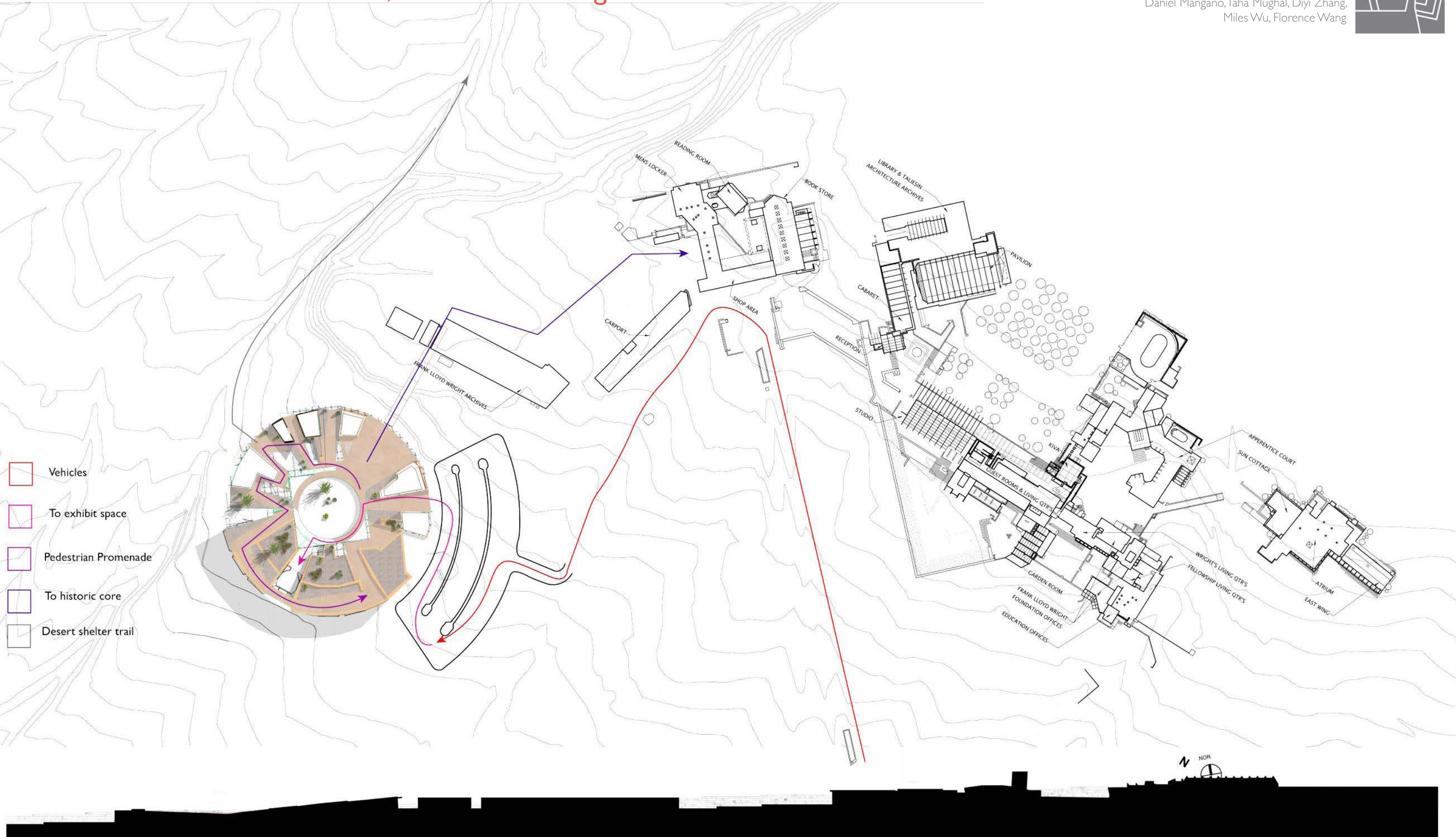
This proposal for the visitor center at Taliesin west understands the role of the visitor center on several axes, the physical landscape and the relationship between Frank Lloyd Wright's work as relationships that must be balanced in context. The visitor center should be a didactic installation that introduces guests to the work of Frank Lloyd Wright and the legacy it has had on American architecture and around the world.

The construction of the visitor center is recommended to be completed in five phases. The first phase will introduce an improved ticketing area, followed by additional restrooms and an objects conservation and display annex. Phase 4 will transform the crescent to an exhibition space and lecture theater.

# Individual Design Proposal - Daniel Mangano

## Vistor Center for Taliesin West, Crescent x Wedge

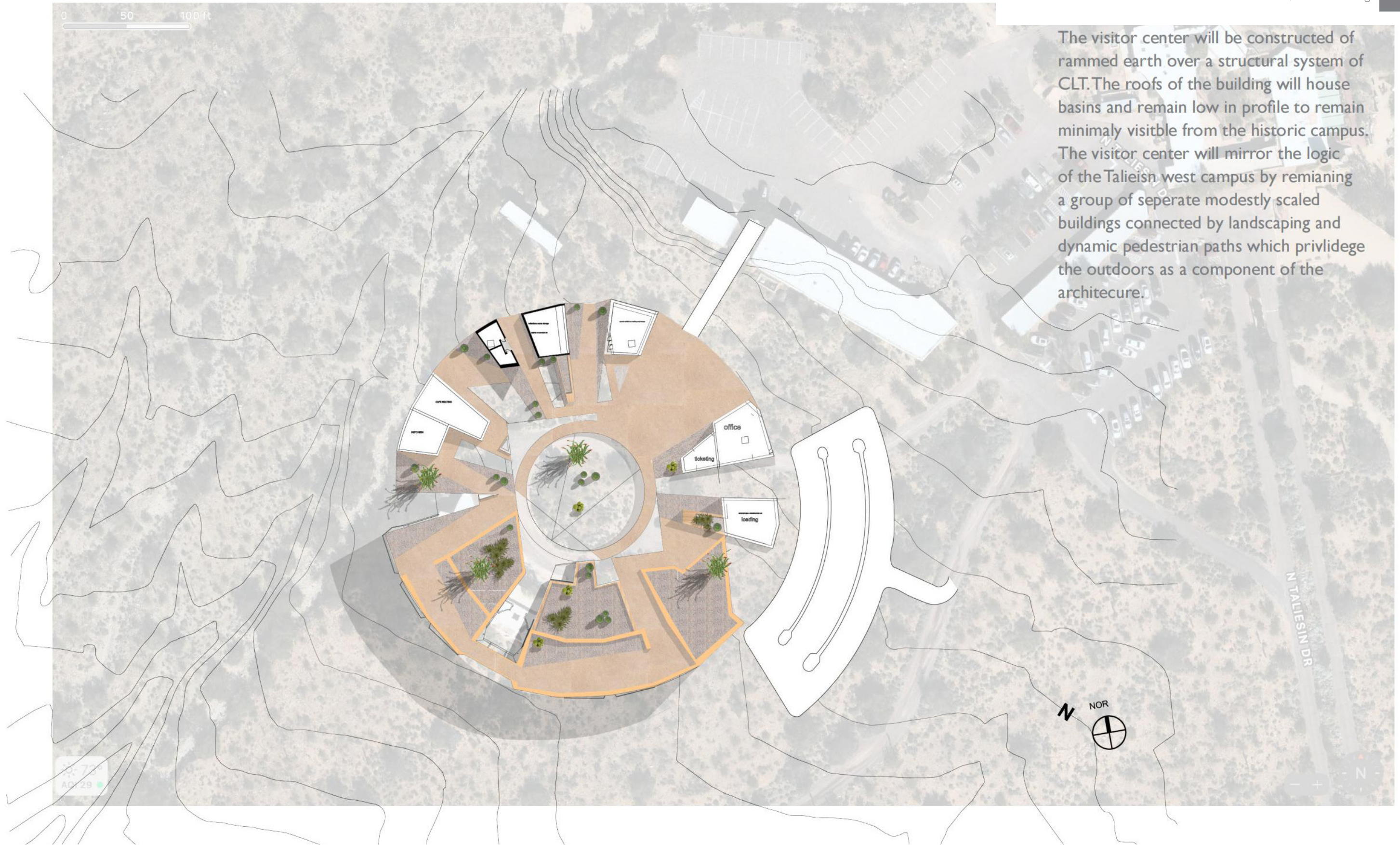
HSPV 72 | Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



# Individual Design Proposal - Daniel Mangano

## Visitor Center for Taliesin West, Crescent x Wedge

HSPV 721 Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



The visitor center will be constructed of rammed earth over a structural system of CLT. The roofs of the building will house basins and remain low in profile to remain minimally visible from the historic campus. The visitor center will mirror the logic of the Taliesin West campus by remaining a group of separate modestly scaled buildings connected by landscaping and dynamic pedestrian paths which privilege the outdoors as a component of the architecture.

# Individual Design Proposal - Daniel Mangano

## Vistor Center for Taliesin West, Crescent x Wedge

HSPV 721 Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



# Individual Design Proposal - Daniel Mangano

## Visitor Center for Taliesin West, Crescent x Wedge

HSPV 72 | Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
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The visitor center will make use of the slope as an opportunity to nest the program into the ground which aids in passive cooling in the extreme heat. The pedestrian path will be at ground level closer to the main campus and become a roof walk towards the south allowing for views of the campus and the city of Scottsdale AZ. Each basin will be fitted with a drainage system to empty runoff water into a rain garden to resolve the movement of water in high amounts during the rainy season and embrace the natural cycles of the desert.

# Individual Design Proposal - Taha - The Crescent Visitor Center and Interactive Center

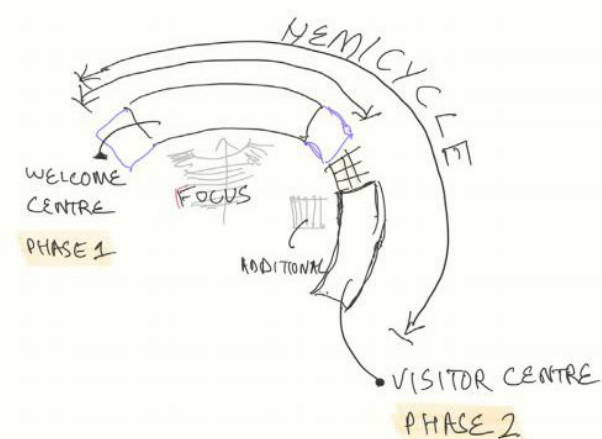
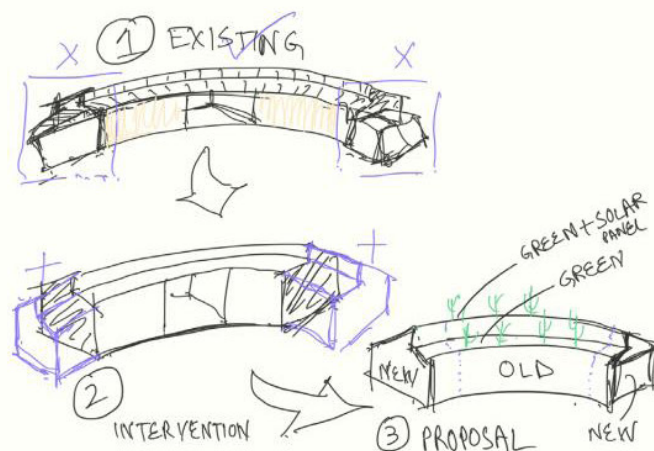
HSPV 721 Capstone Studio: Materials + Materialities  
 TALIESIN WEST VISITOR CENTER  
 Daniel Mangano, Taha Mughal, Diyi Zhang,  
 Miles Wu, Florence Wang



## DESIGN PHILOSOPHY

- The crescent building at Taliesin West is one of the last major building additions on-site designed and constructed by Taliesin Associated Architects, whose work continued Wright's legacy after his death. In respect of its significance, the proposal shall seek to retain and renovate the majority of the existing Crescent building while altering most of the interiors.
- Sustainable design interventions including a green roof and solar paneling shall seek to enhance the building's performance.
- The New addition adjacent to the Crescent shall serve as a Visitor Center that shall bear similarity in volume, form, and design to that of the Crescent building and shall be laid on the principles of organic architecture, UNESCO's and NPS guidelines for new additions to historic buildings.
- The design shall prioritize coherence and harmony between the existing and new structure, creating a unified and seamless architectural composition.
- The overall geometry shall seek to maintain a hemicycle shape, the main entrance staircase to the Crescent building shall continue being a focal point while a smaller staircase placed sideways to the phase 2 Visitor center shall aim to enhance user-centric design catering to the visitor needs.

## CONCEPT



## CASE STUDIES

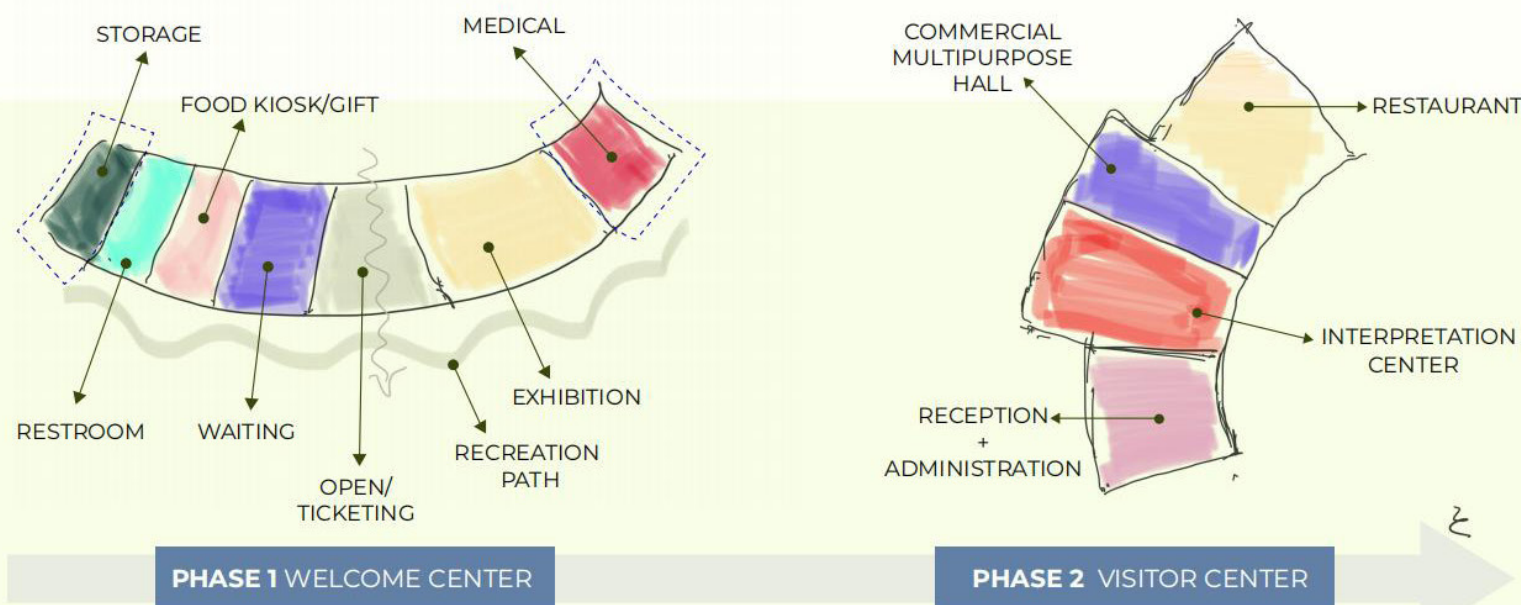


Source: <https://architecturecompetitions.com/flamingovisitorcenter/>



The New Visitor Center at Shofuso (2014) : Thesis by Parima Sukosi

## PROGRAMMING



Top: Abu Dhabi Flamingo Visitor Center  
 Middle: Visitor Center at Shofuso  
 Bottom: Desert X AIUla Visitor Centre, Saudi Arabia

### Inspirations:

1. Locally available sustainable materials
2. Seamless circulation paths.
3. Strong Interior and Exterior connections
4. Eco-friendly designs
5. Need-based programming



# Individual Design Proposal - Taha - The Crescent Visitor Center and Interactive Center

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## MATERIAL PALLETTE & SUSTAINIBILITY



Adobe Brick



Mass Timber



Engineered Wood Flooring



Translucent Wood Panels



Structural Composite Timber



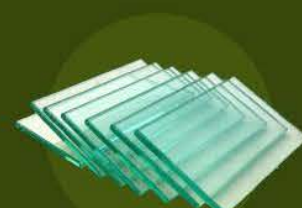
Tensile Fabric



Clay Tiles



Lime and Mud Mortar



Glass

## FEATURES



Green Roof

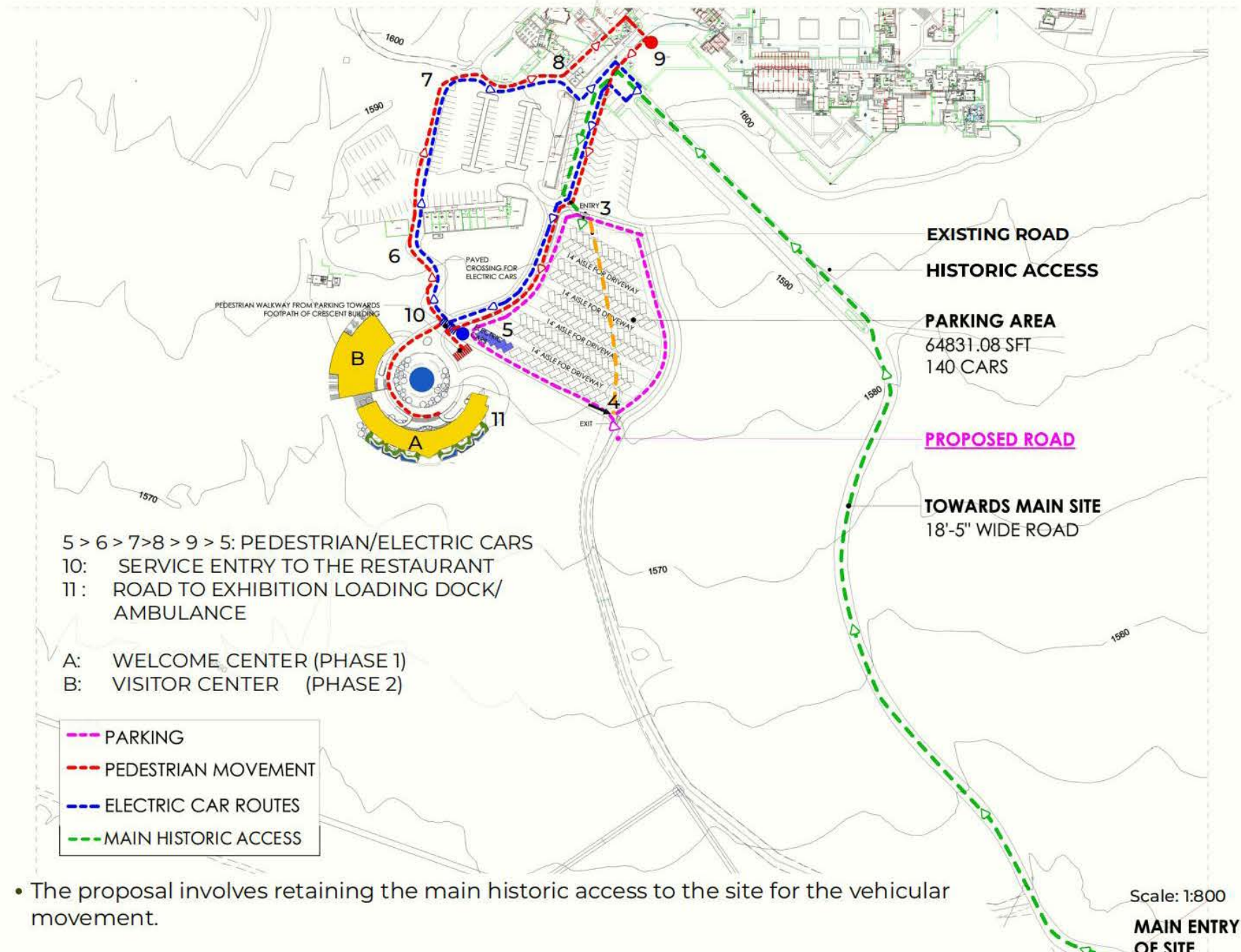


Solar Panel



Rain Water Harvesting

## SITE PLAN WITH CIRCULATION ROUTES

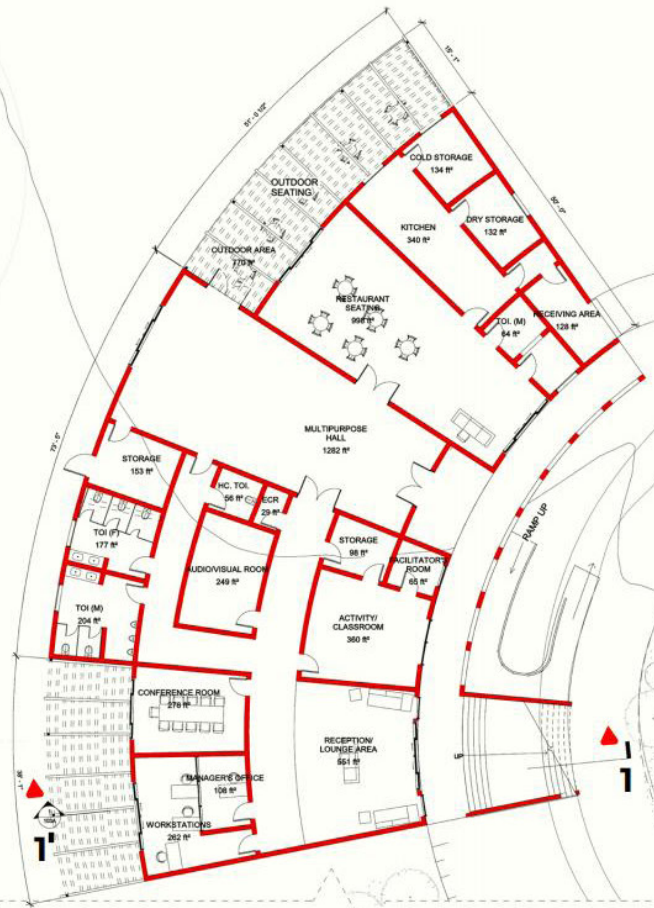


- The proposal involves retaining the main historic access to the site for the vehicular movement.
- The orange colored dotted line is the existing road on site. In line with UNESCO's guidelines on interventions at historic sites, I propose to alter this road to create adequate parking space for over 150 cars, which shall preserve the sanctity of the historic access.
- Position 5 serves the starting point where the pedestrian circulation route through points 6, 7, 8, and through the bookstore to position 9 and back eventually. This shall solve the pedestrian-vehicular conflict on site.
- The same road can be used by the electric cars for the visitors in small groups, shown here in blue dotted line.

# Individual Design Proposal - Taha - The Crescent Visitor Center and Interactive Center

## PROPOSED FLOOR PLANS

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 TALIESIN WEST VISITOR CENTER  
 Daniel Mangano, Taha Mughal, Diyi Zhang,  
 Miles Wu, Florence Wang

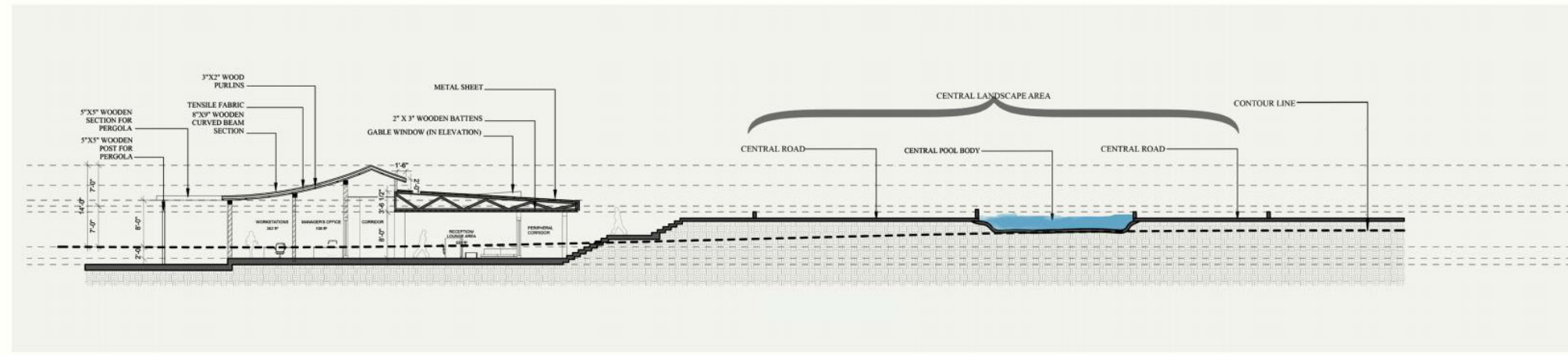


**VISITOR CENTER**  
 (8202 SFT)



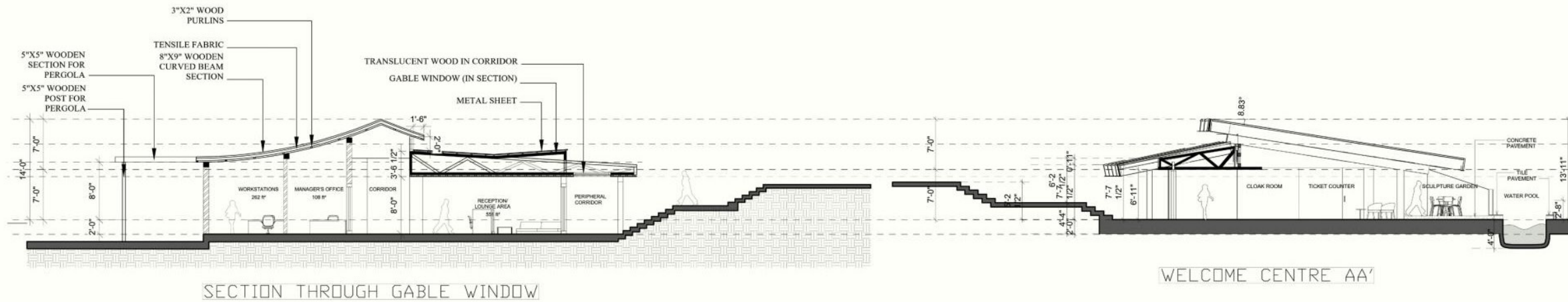
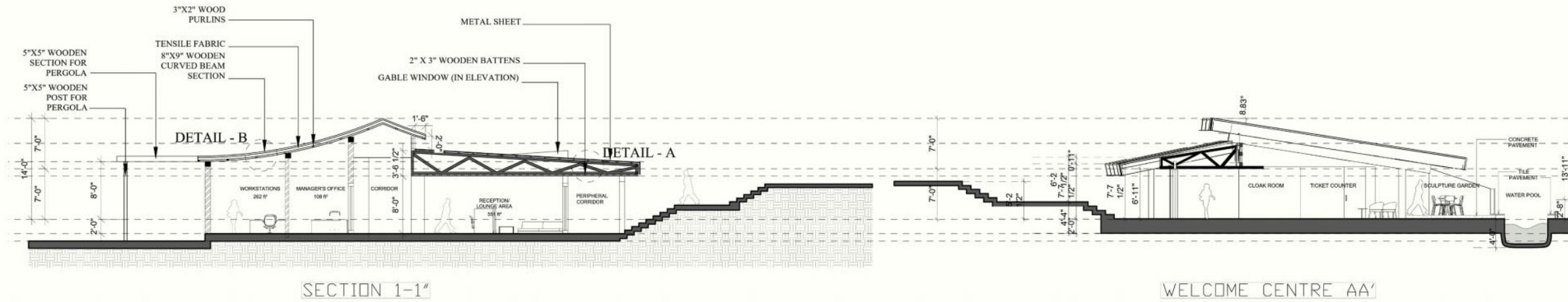
**WELCOME CENTER**  
 (8258 SFT)

## SITE SECTION





## COMPARATIVE SECTIONS



## ELEVATIONS



Rear Elevation



Front Elevation



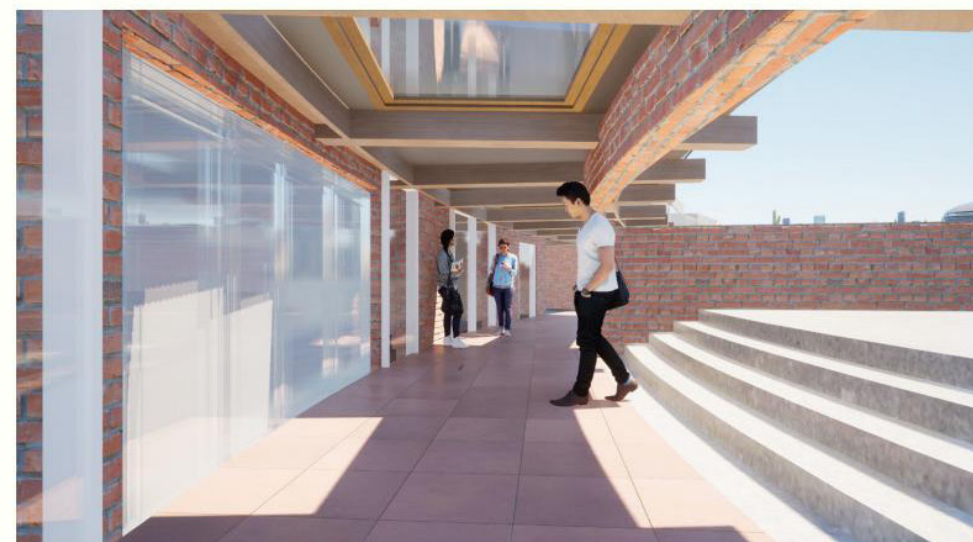
### SIMILARITY IN FORM, SHAPE, VOLUME & DESIGN LANGUAGE

- The comparative sections demonstrate the volumetric relationships of the visitor center shown in the left and the welcome center shown on the right. As can be seen, the visitor center maintains a similar height while being influenced by the design of the welcome center.
- The building constructed in Adobe bricks, shall have skylights in the peripheral corridor, and long curved beams supporting the tensile fabric above in its rear side.
- The elevations also demonstrate how the new visitor center aims to establish a unified composition with the Crescent building, making it a sympathetic contemporary design in historic settings.

# Individual Design Proposal - Taha - The Crescent Visitor Center and Interactive Center

## PROPOSED VIEWS OF 'THE CRESCENT'- Visitor and Interpretation Center

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TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
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**Top left:** Main view of the two buildings showing harmony in form, scale, proportions. Green roof and solar paneling atop Crescent building.

**Top right:** Aerial view of the two buildings laid in hemicycle layout showing dominance of Crescent building.

**Middle right:** Borrowing the exteriors to the interiors in new Visitor Center building constructed in Adobe Brick and tensile fabric.

**Bottom left:** Entrance to the Welcome Center showing new Ticketing counter in the central open foyer.

**Bottom right:** Peripheral corridor of the Visitor Center showing translucent wood skylights.

# Individual Design Proposal - Florence Wang

## Taliesin West Visitor Center

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TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



### DESIGN PHILOSOPHY

Accessibility

Sustainability

Possibility

The visitor center design gives new life to the Crescent building by making a connection between the site and the visitors. The design focuses on improving the accessibility between the visitor center and the main campus as well as the circulation in the building while ensuring its sustainability by retaining major parts of the Crescent and using sustainable materials for additions. Aside from solving the growing demand for infrastructure, the new visitor center emphasizes the flexibility of the space and intends to explore more possibilities that meet the needs and interests of visitors of all ages.



Entrance View (View from the Northeast)



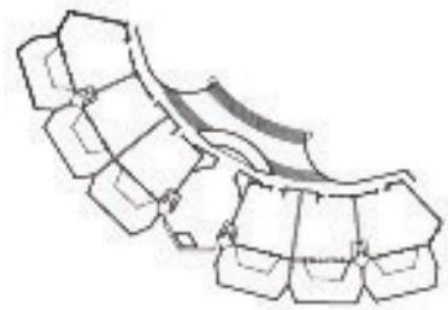


## ALTERATION

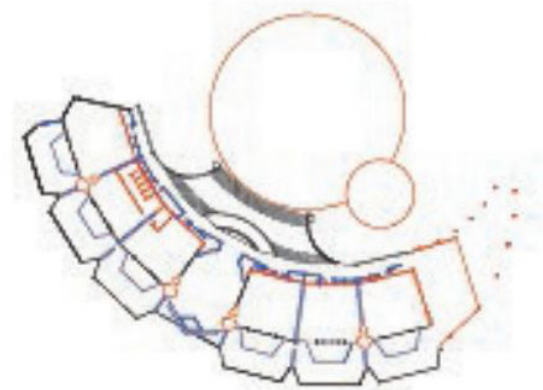
In this design proposal, the majority of parts of the crescent building will be retained. At the same time, some alterations will be made to change this enclosed residential building to a more welcoming and comprehensive visitor center.

— Alteration & Addition

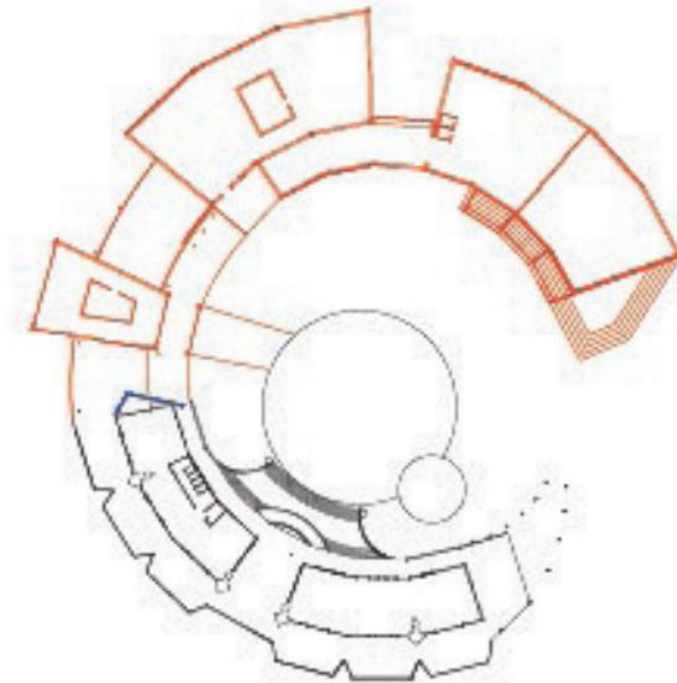
— Demolition



Current Crescent Building



Design Phase 1: Alteration



Design Phase 2: Addition

### Phase 1:

- A shaded pergola is added on the east end as the new entrance, and the pick-up & drop out point
- The Courtyard becomes a plaza for pedestrian
- The north walls are moved inside by 30 inches to yield more space for the hallway
- The walls dividing the units are turned down
- Chimneys are altered into lightwells for ventilation.

### Phase 2:

- Additions are added and connected with the west end of the Crescent, including, a restaurant, interpretive area, and program and event area
- The terrace, extended from the original Crescent's hallway, connects the olds and the additions into a round

# Individual Design Proposal - Florence Wang

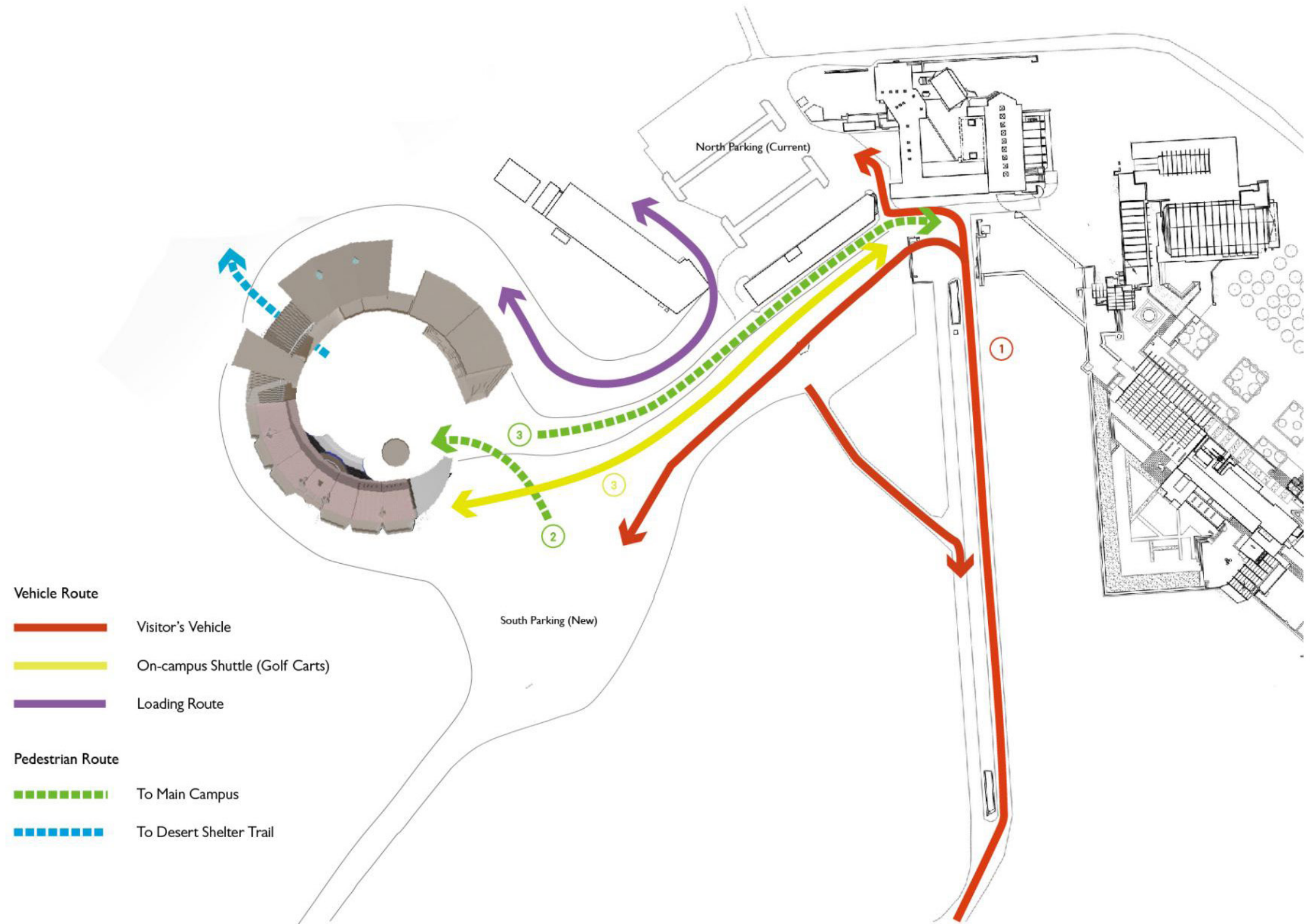
## Taliesin West Visitor Center

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TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



### CIRCULATION

The design intends to improve the accessibility between the visitor center and the main campus by separating the pedestrian route from the vehicle. Visitors drive to the site through Taliesin Dr. and turn left to the parking lot, either the current or the additional parking lot. Afterward, visitors can enter the building through the pergola on the east end through the pickup/drop-off area, a shaded pergola. As the courtyard is completely used for pedestrians, a well-paved pedestrian path starts here, leading the visitors from the building to the main campus, separated from the vehicle. The golf cart serves as the on-campus transit for those in need. The ground surrounding the building is paved for the loading needs of collection from the archive and the catering for the restaurant. The starting point of the future desert shelter trail will be set between the restaurant and the exhibition building, an opening of the covered terrace that is closest to the wash, and the ideal route leading up to more shelters.



# Individual Design Proposal - Florence Wang

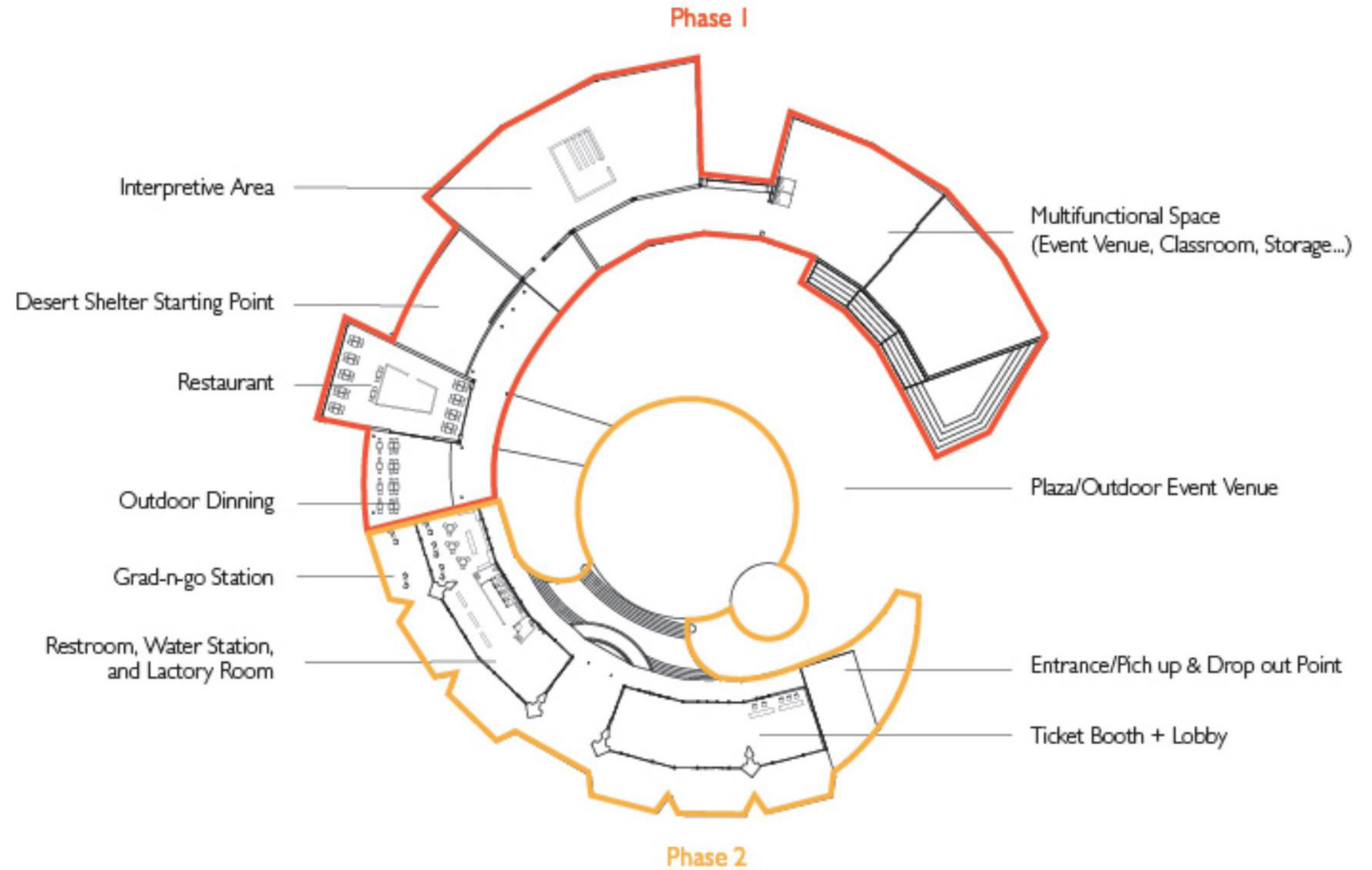
## Taliesin West Visitor Center

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TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



### PHASES & PROGRAMS

In Phase I, the existing parts of the Crescent become a welcome center that provides all the essential infrastructure, and the courtyard is altered into a multifunctional plaza. In Phase 2, the new addition covers the interpretive area and the spaces for various kinds of programs and dining. A few highlights of the designs are the restaurant with the wide opening facing the city view and the desert wash, the green roof above the exhibition building, and a wide step seating serving as stairs to the rooftop and auditorium for outdoor events.





# Individual Design Proposal - Florence Wang

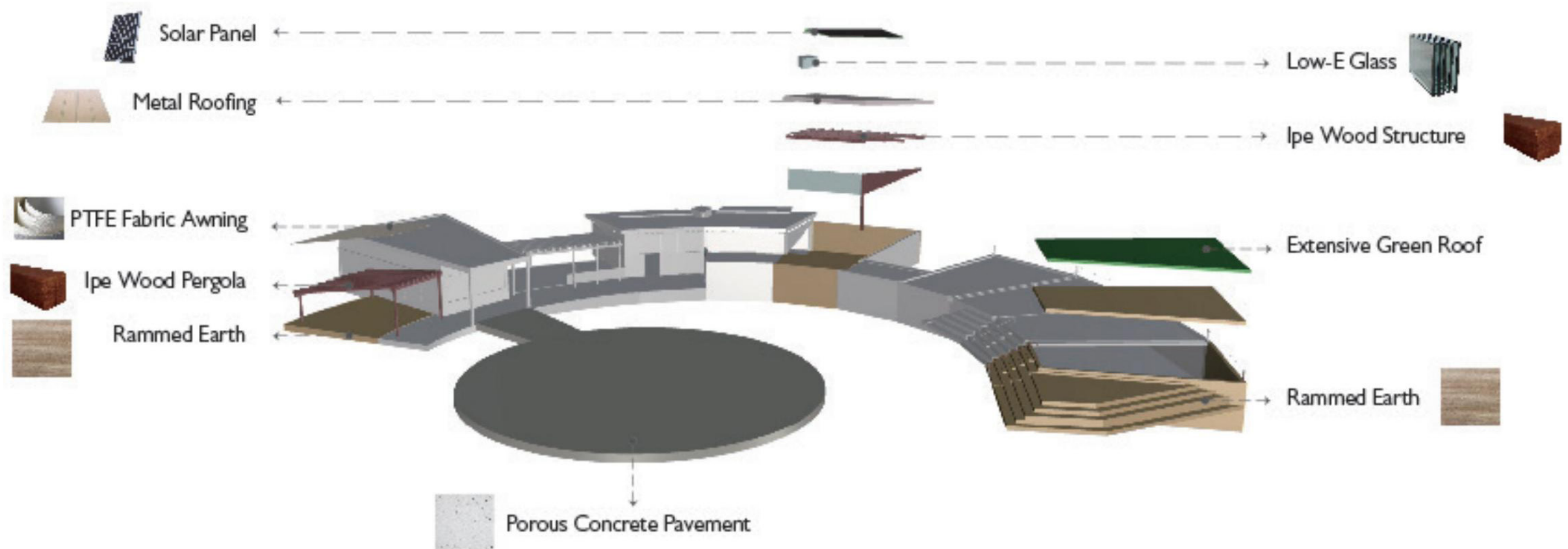
## Taliesin West Visitor Center

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TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



### MATERIALS

The choice of building materials takes sustainability into prior consideration. The foundation and walls of the additions are built with rammed earth for its high thermal mass that can moderate temperature, and its natural color and texture will better match the surroundings. The rafters and purlin in the pergola and exhibition building's roof are made of ipe wood for its density and hardness that perform well under extreme weather. The roofs are installed with solar panels to help the self-sufficiency on electricity. Also, the green roofs are widely used in the design. All the glazing are Low-E glass that can effectively minimize the entrance of the UV lights.



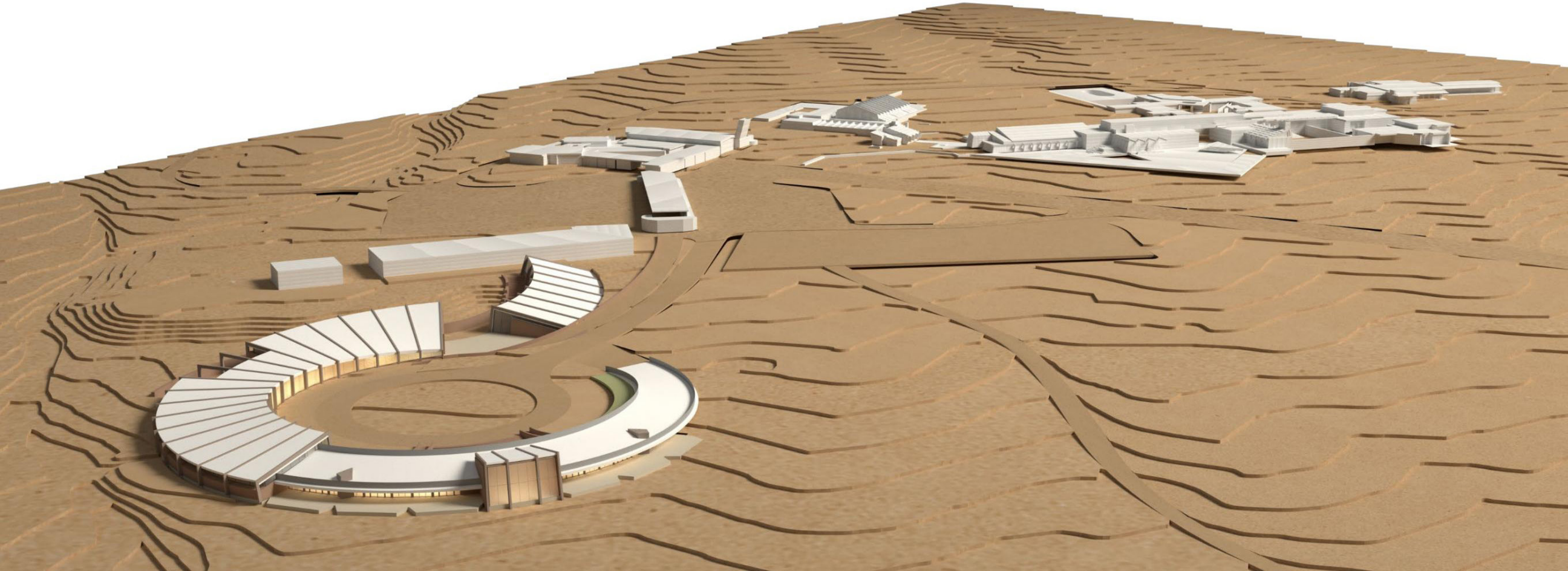
# Individual Design Proposal - Miles Wu

## Visitor Center - Into the desert

HSPV 721 Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



CHENGJUN (MILES) WU  
MAKEVER



# Individual Design Proposal - Miles Wu

## Vistor Center - Into the desert

HSPV 72 | Capstone Studio: Materials + Materialities  
 TALIESIN WEST VISITOR CENTER  
 Daniel Mangano, Taha Mughal, Diyi Zhang,  
 Miles Wu, Florence Wang



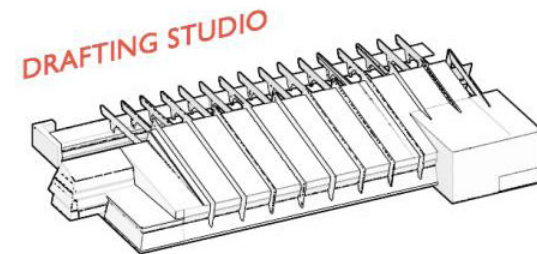
**RESPECT  
ORGANIC  
DESIGN**



**SUSTAINA-  
BILITY &  
FLEXIBILITY**



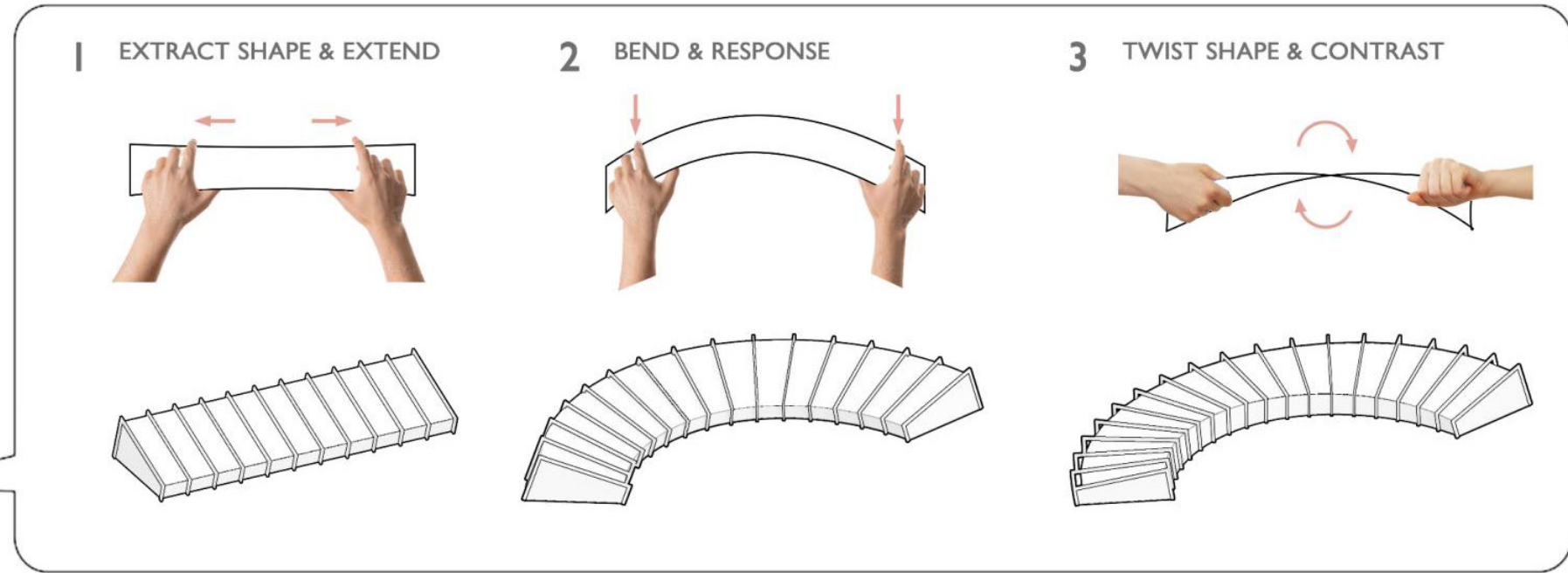
**INTEGRATION  
WITH  
NATURE**



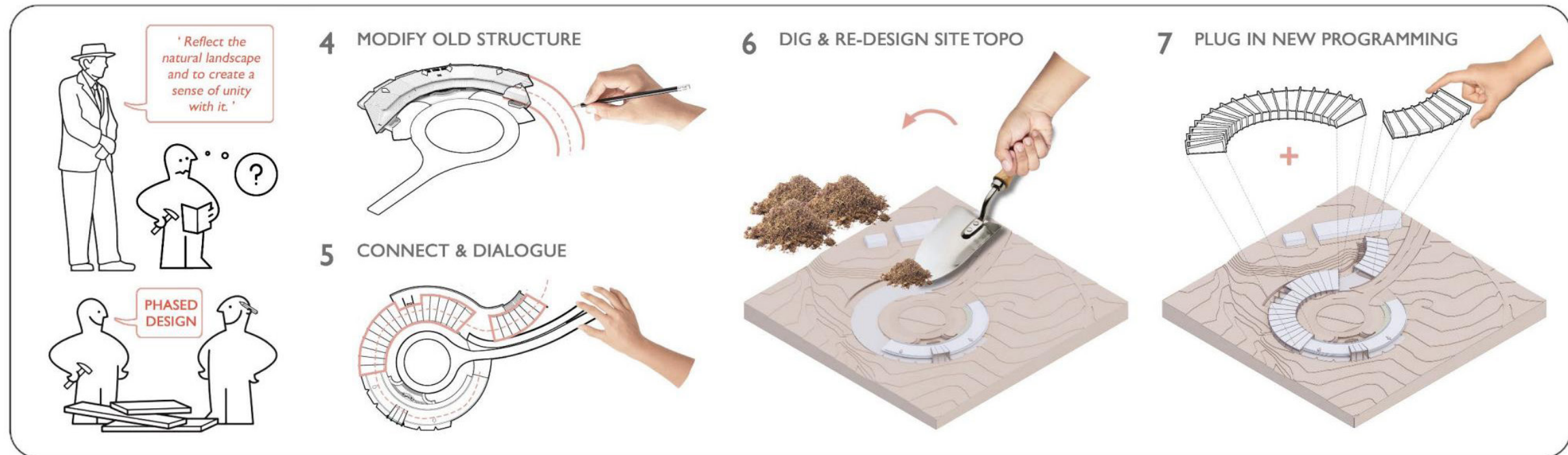
DRAFTING STUDIO



'ORGANIC,  
NATURAL  
MATERIALS,  
FUNCTIONAL'



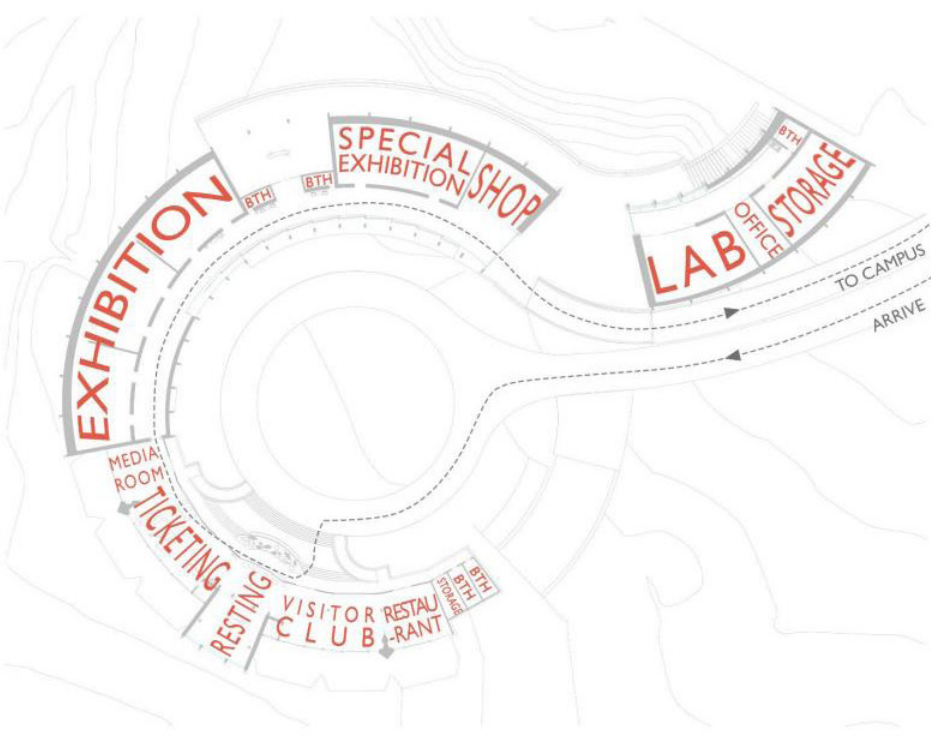
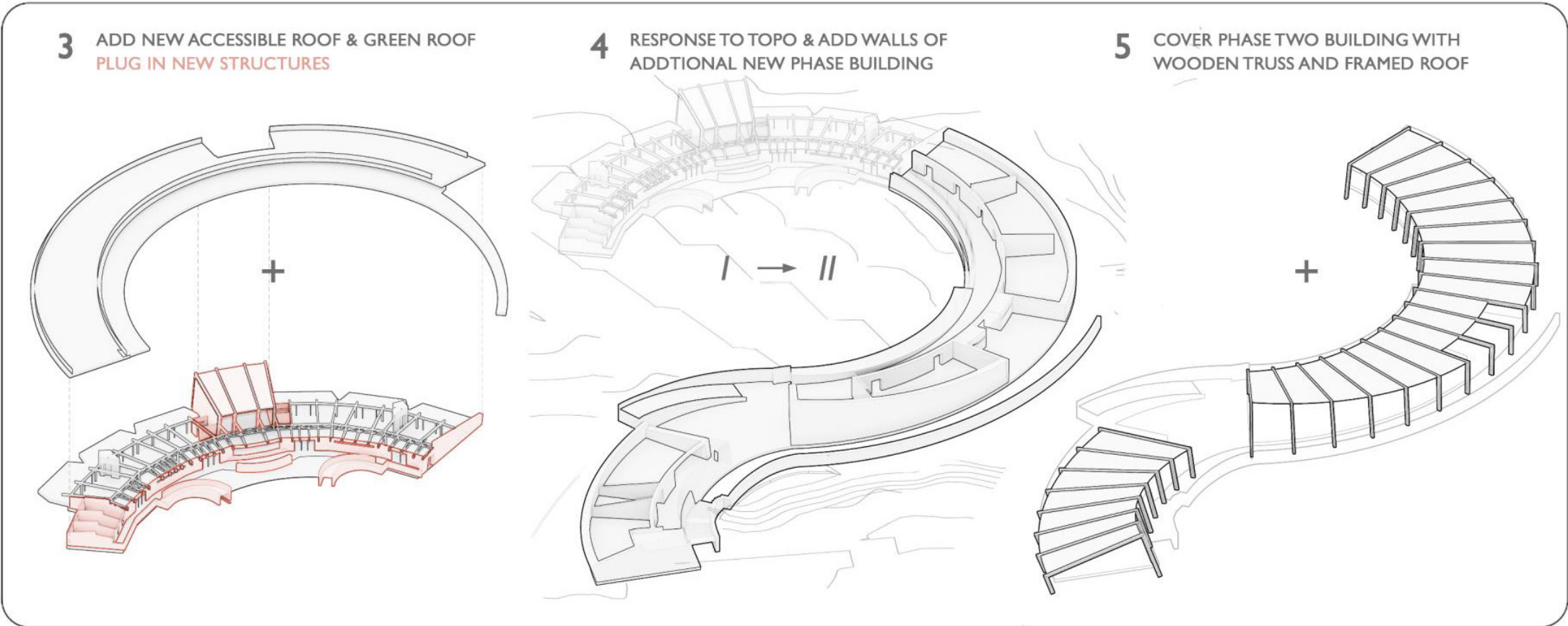
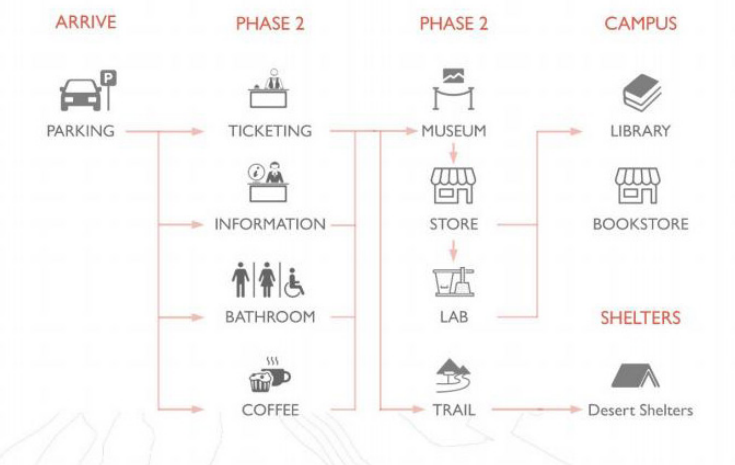
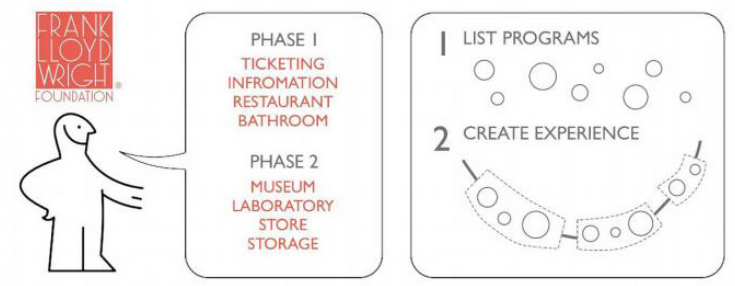
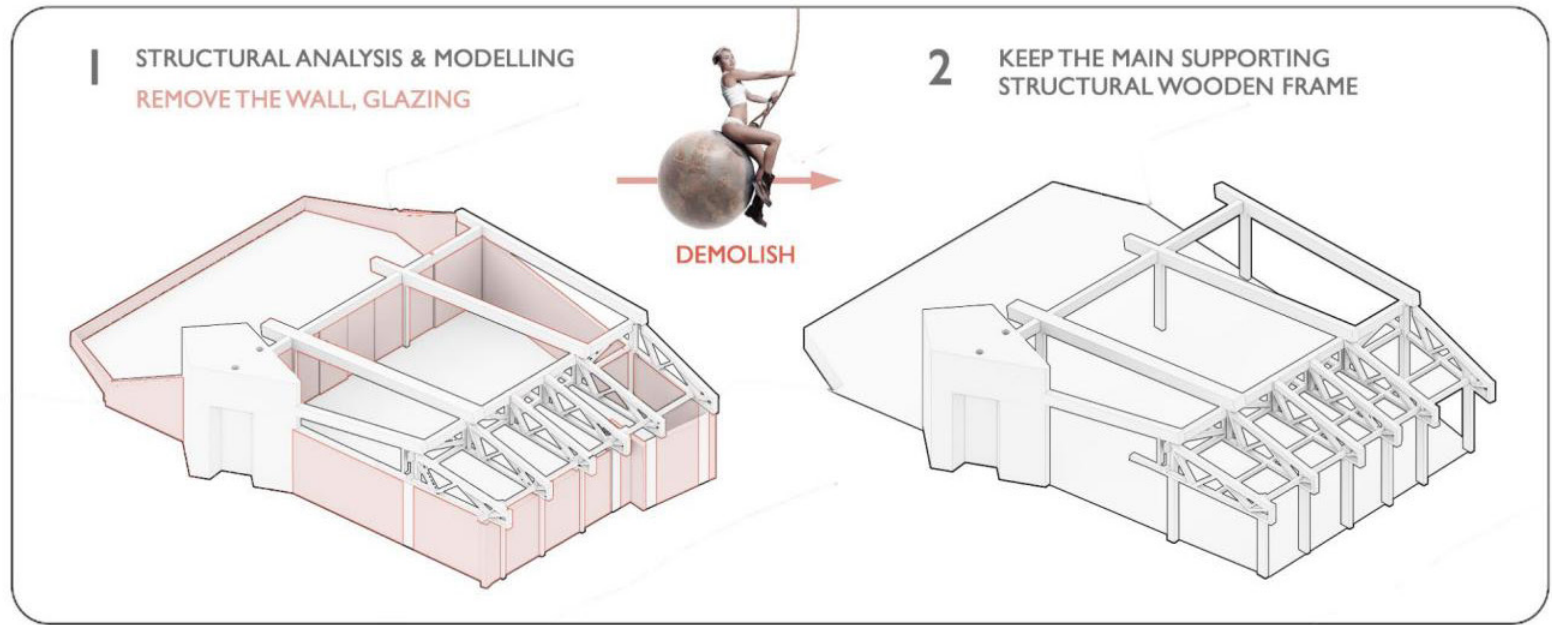
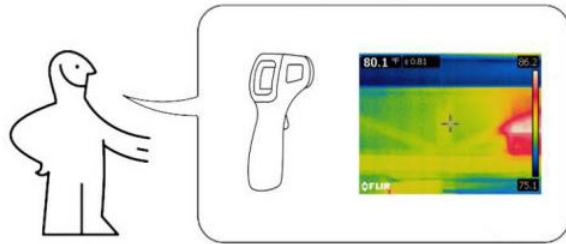
The adaptive reuse of the crescent building at Taliesin West embrace the spirit of Frank Lloyd Wright's organic design philosophy while also accommodating the needs of modern occupants. The phased extension building should also follow this philosophy and be designed to complement the crescent building in a cohesive manner. The goal is to create a harmonious and functional environment that celebrates the unique features of the desert environment and Taliesin West's design language.



# Individual Design Proposal - Miles Wu

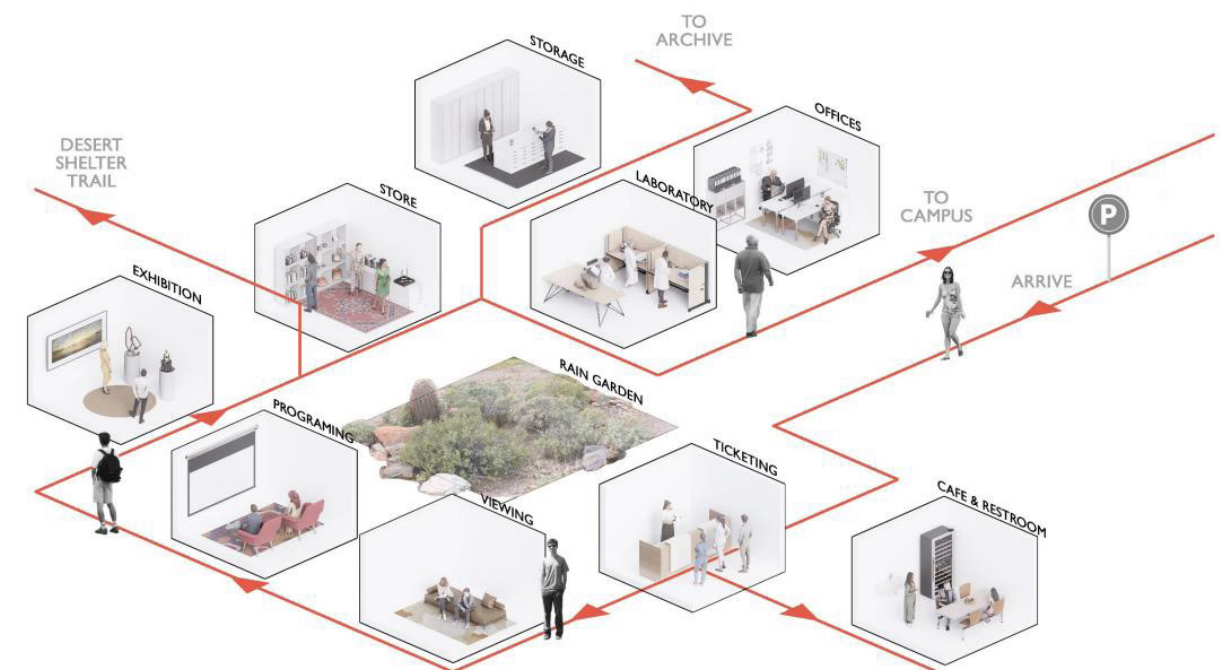
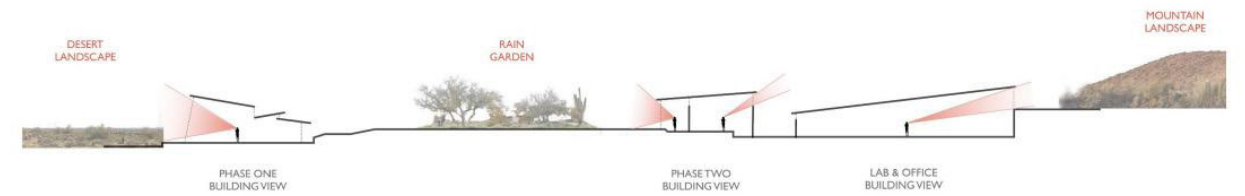
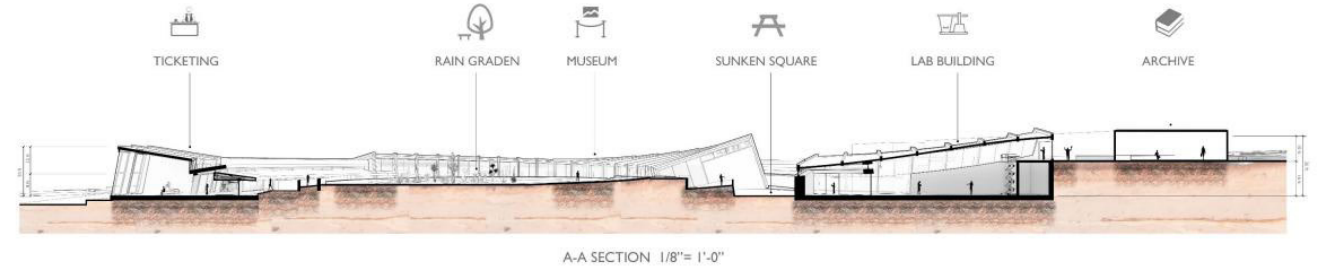
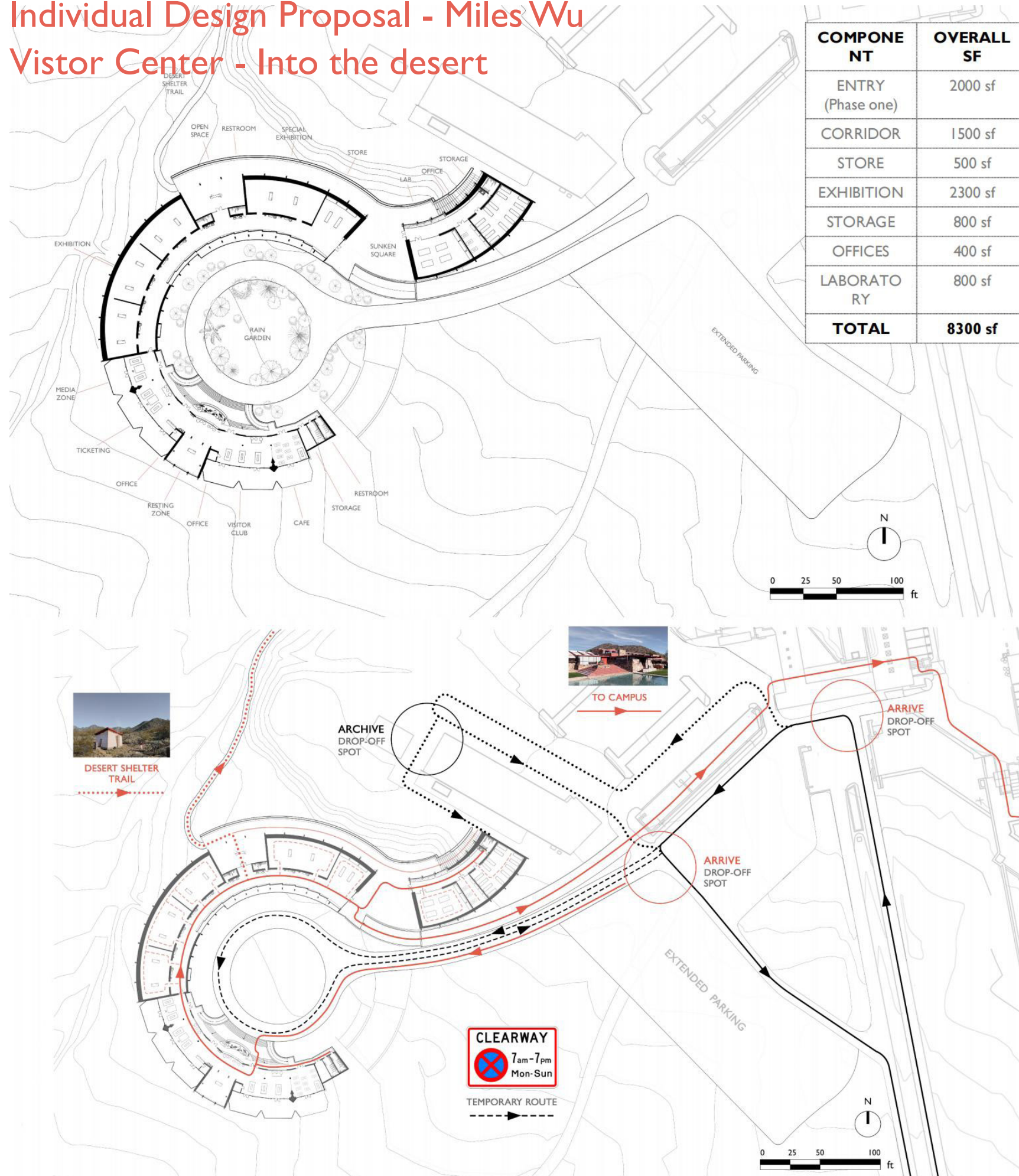
## Visitor Center - Into the desert

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 TALIESIN WEST VISITOR CENTER  
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 Miles Wu, Florence Wang



# Individual Design Proposal - Miles Wu Vistor Center - Into the desert

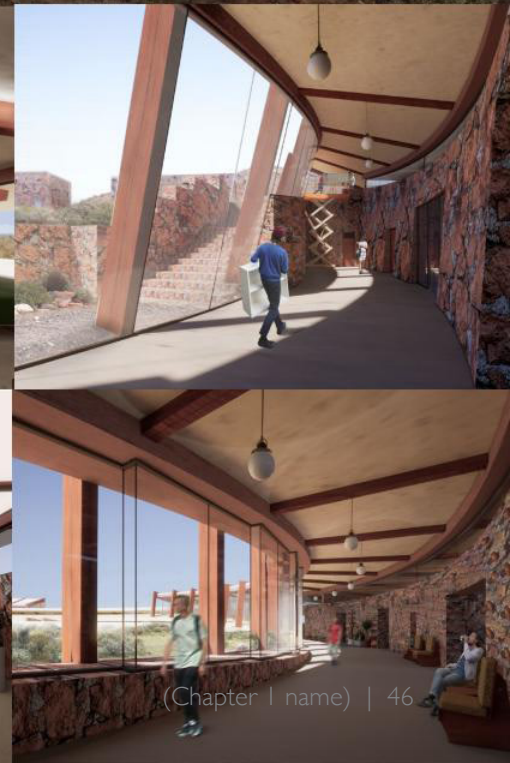
HSPV 72 | Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



# Individual Design Proposal

## Visitor Center for Taliesin West, Crescent x Wedge

HSPV 721 Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
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Miles Wu, Florence Wang



Individual Design Proposal - Diyi Zhang  
The R.A.M.P. at Taliesin West

HSPV 72 | Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



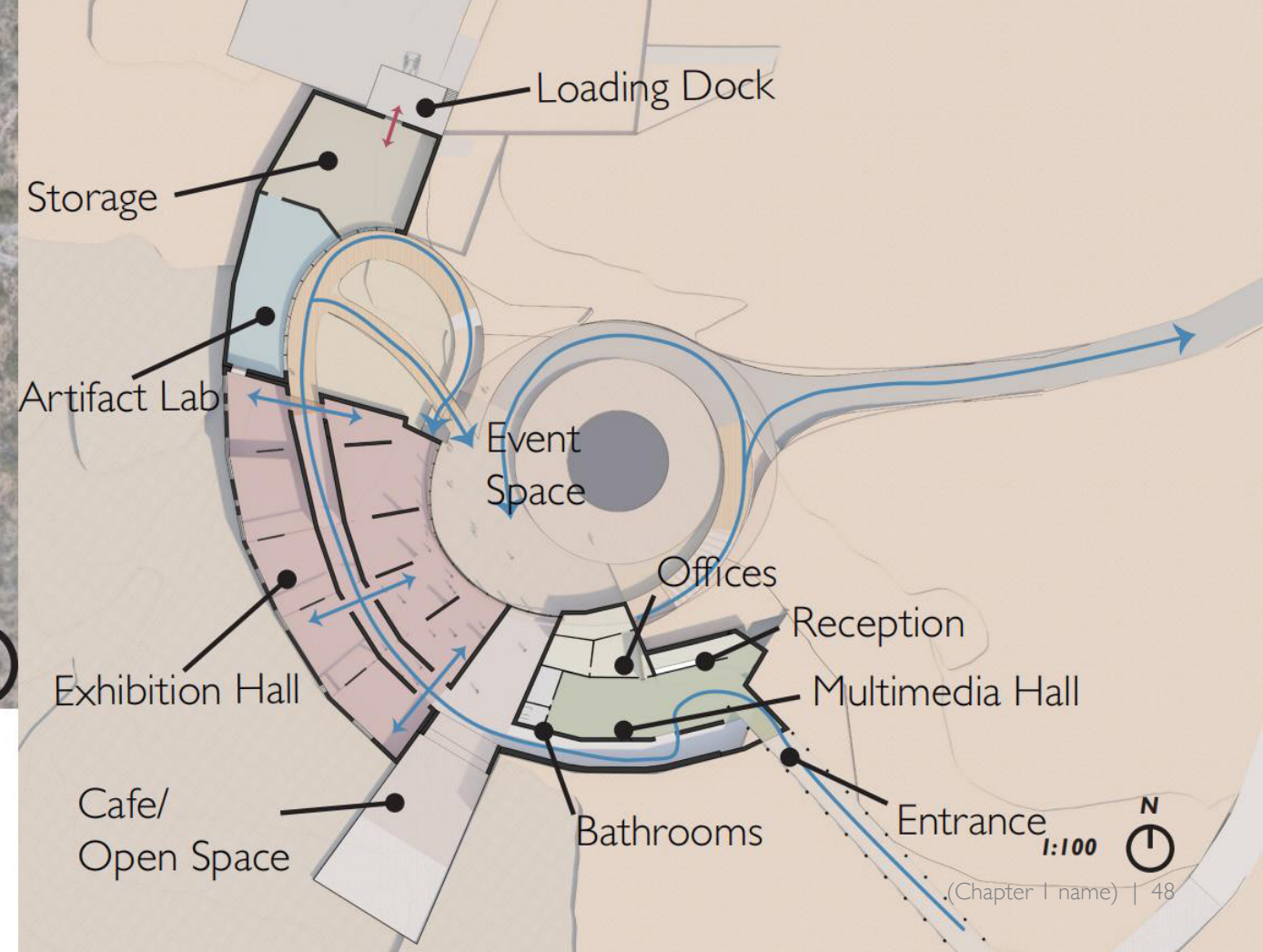
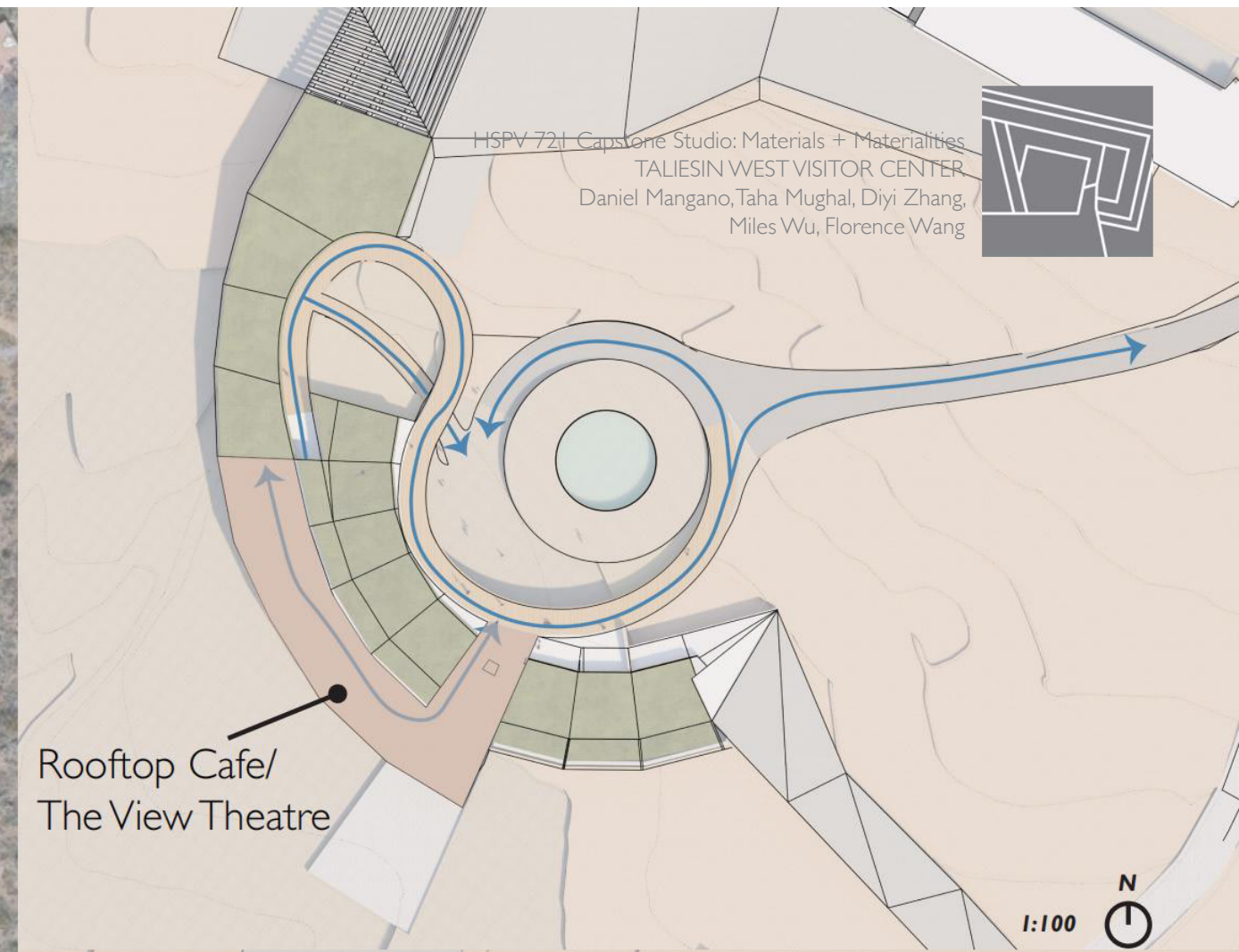
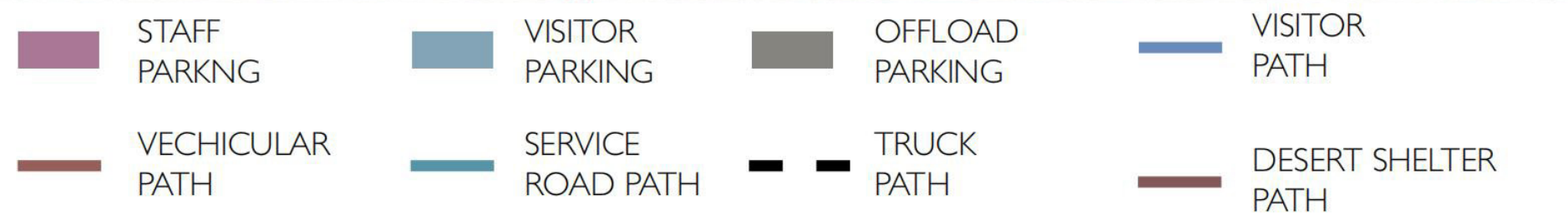
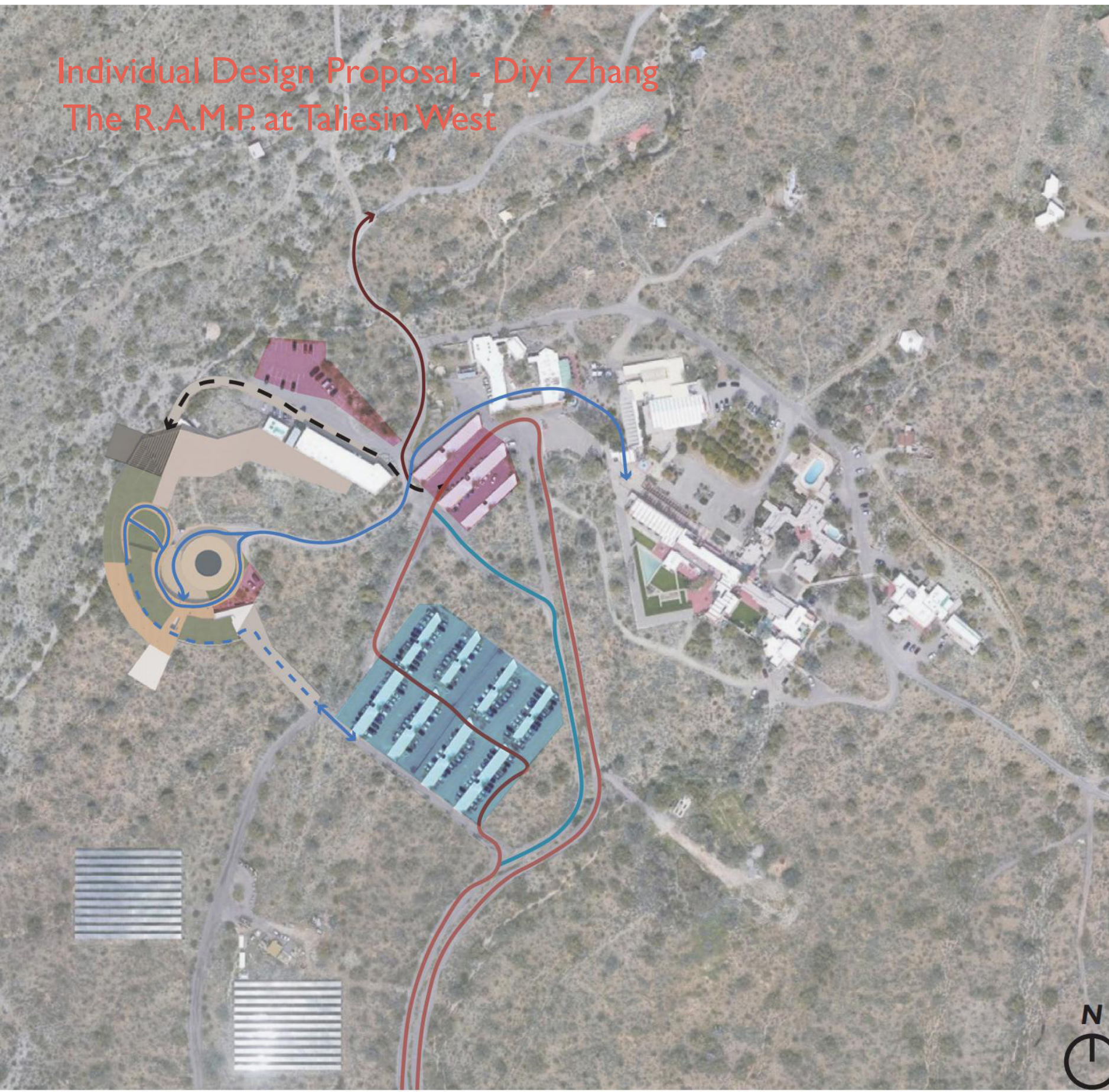
# The R.A.M.P. at Taliensin West

Resplendent, Accessible, Multi-dimensional, Progressive



**DIYI ZHANG**

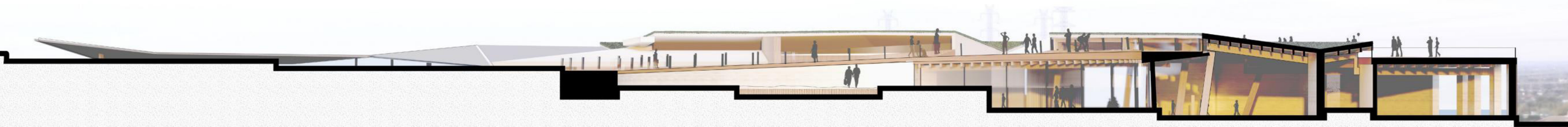
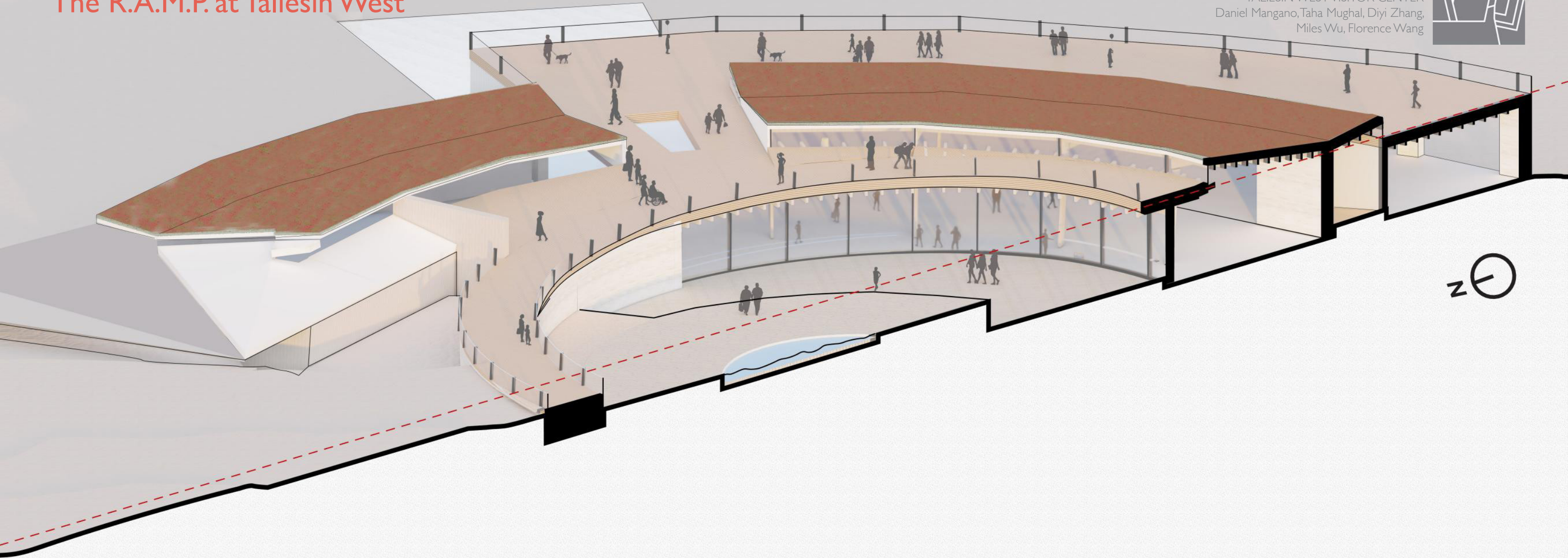
Individual Design Proposal - Diyi Zhang  
The R.A.M.P. at Taliesin West





Individual Design Proposal - Diyi Zhang  
The R.A.M.P. at Taliesin West

HSPV 721 Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



# Individual Design Proposal - Diyi Zhang

## The R.A.M.P. at Taliesin West

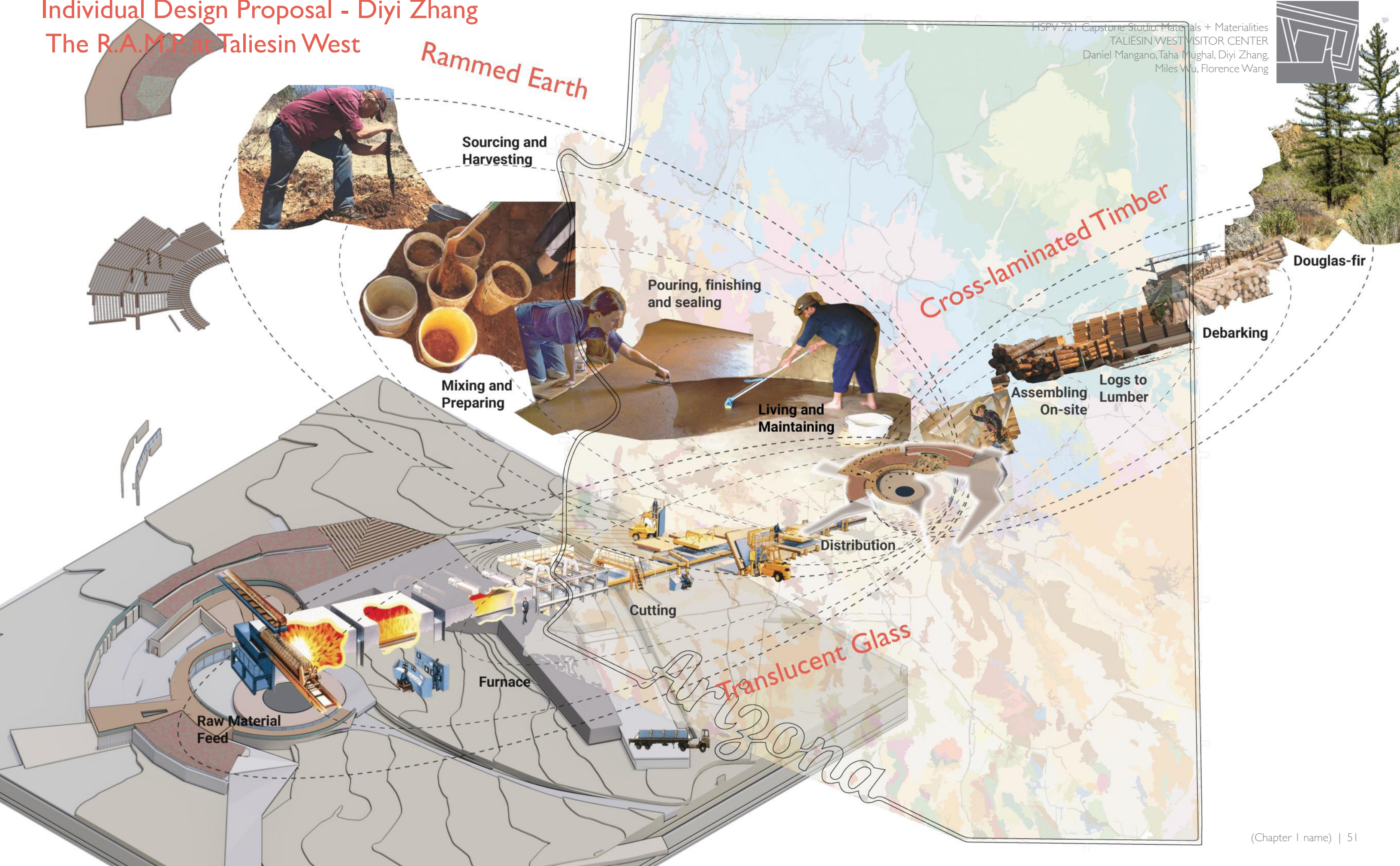
HSPV 721 Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
Miles Wu, Florence Wang



# Individual Design Proposal - Diyi Zhang

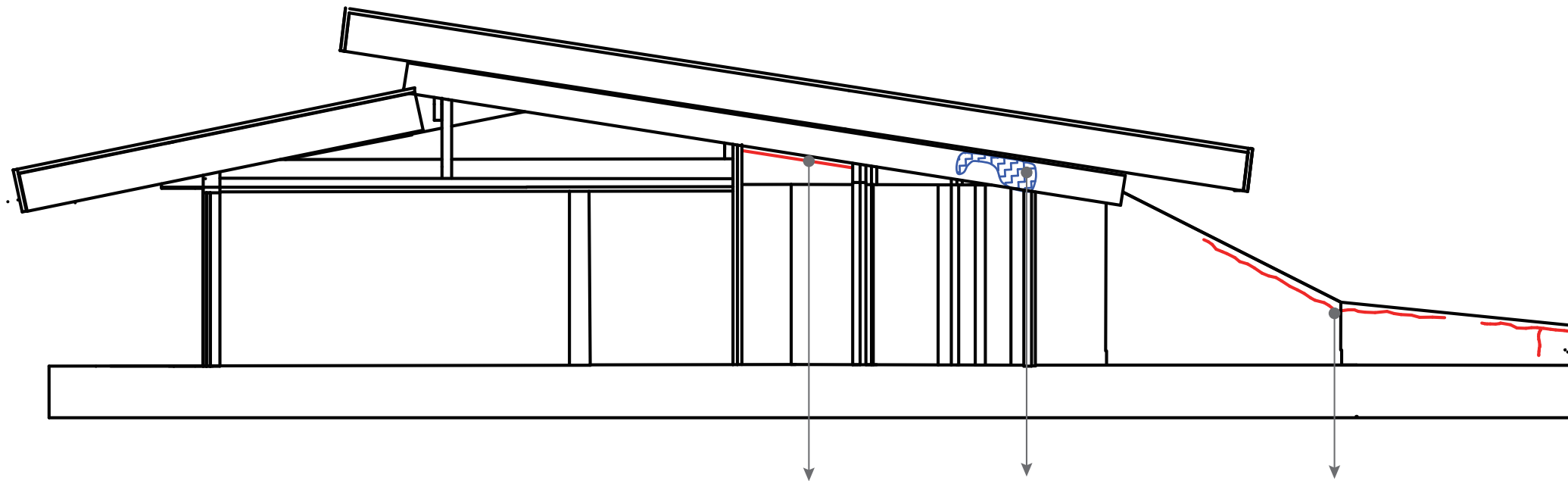
## The R.A.M.P. at Taliesin West

HSPV 721 Capstone Studio: Materials + Materialities  
TALIESIN WEST VISITOR CENTER  
Daniel Mangano, Taha Mughal, Diyi Zhang,  
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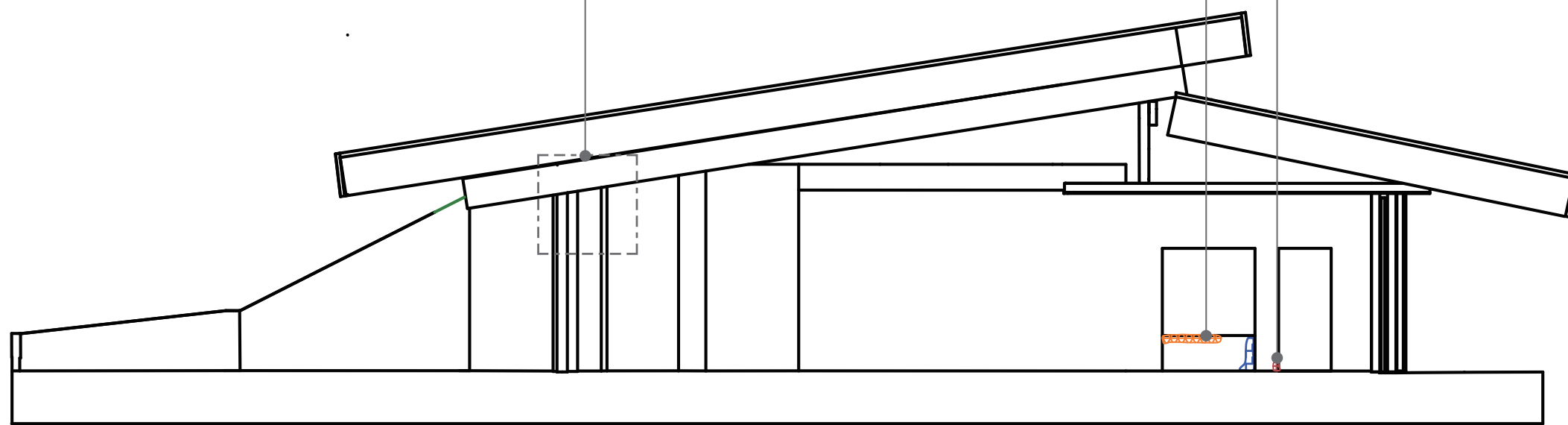
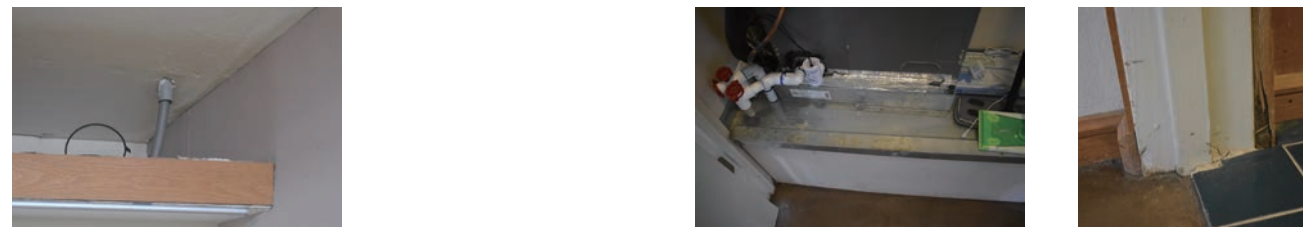
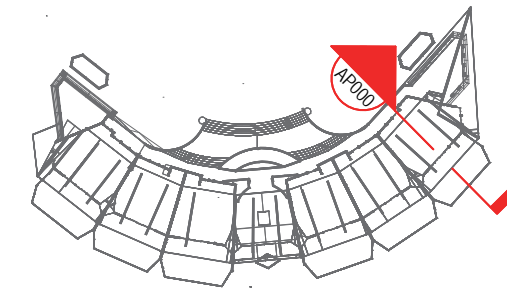


# APPENDIX



03 UNIT 1 SECTION (LOOKING EAST)

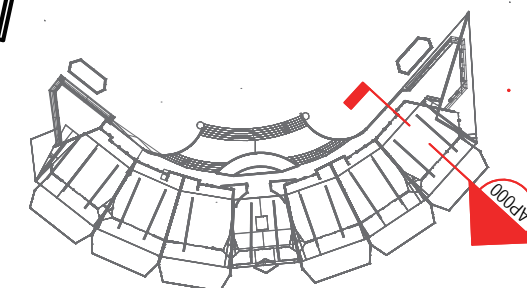
SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG



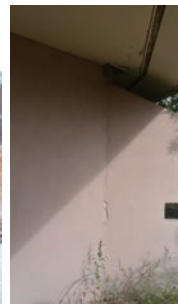
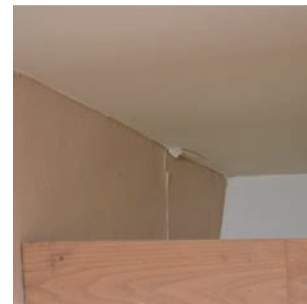
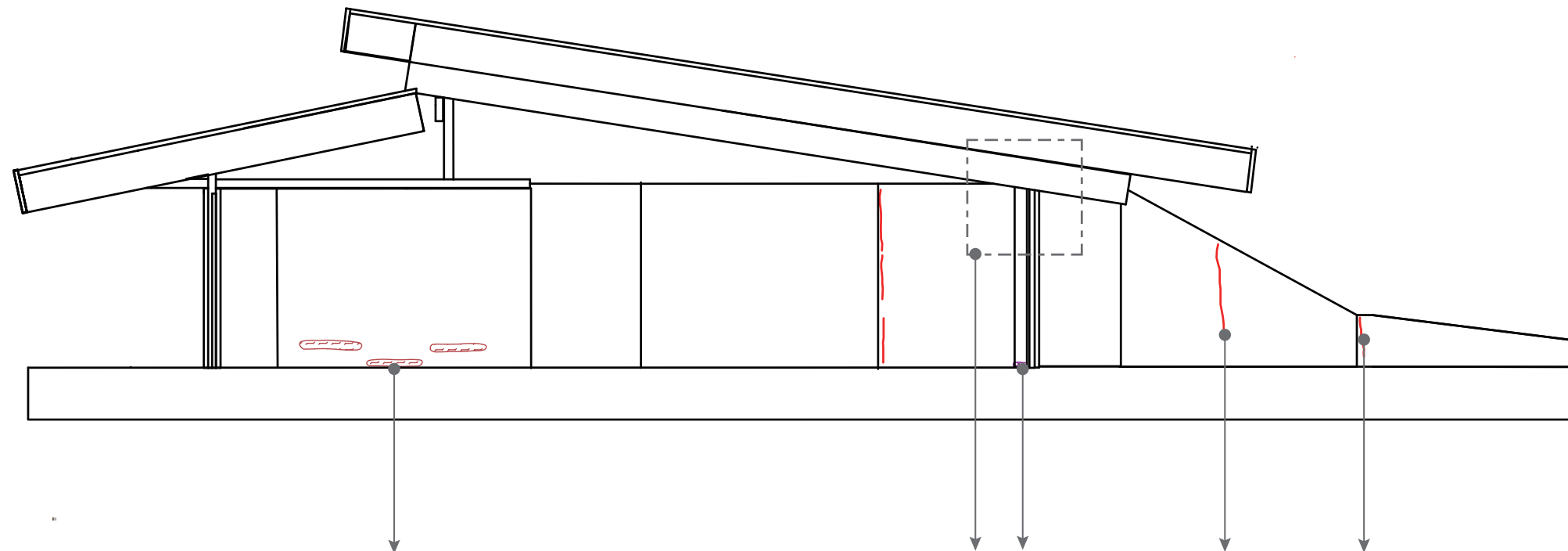
04 UNIT 1 SECTION (LOOKING WEST)

SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG

Water infiltration is found on the end of the beam and its surroundings near the windows.

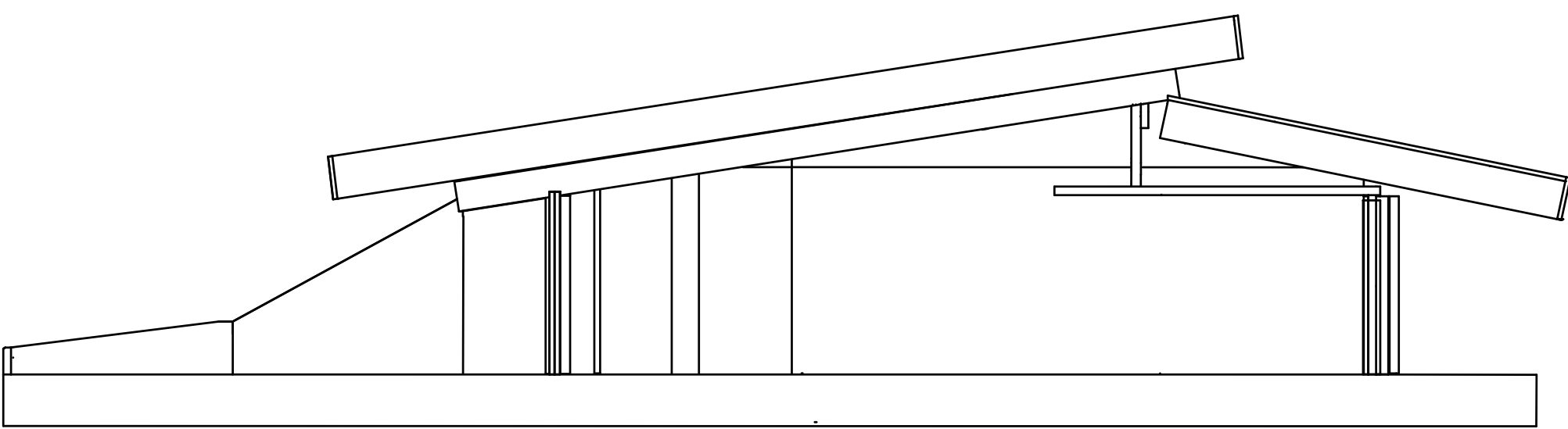
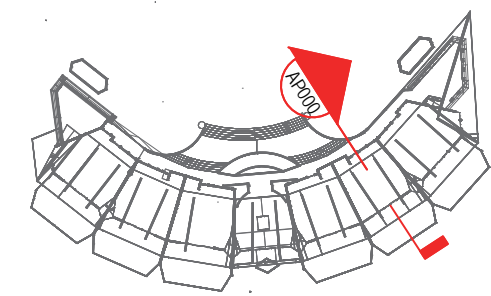


- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

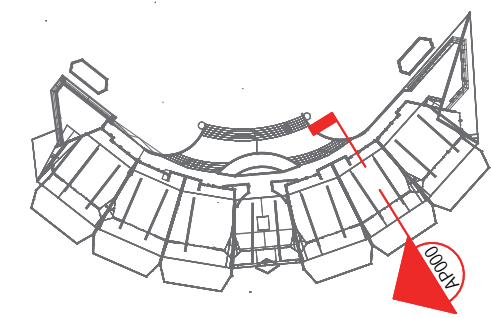


**05** UNIT 2 SECTION (LOOKING EAST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

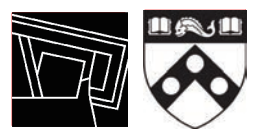
The horizontal ablation on the east wall of the room may be man-made.



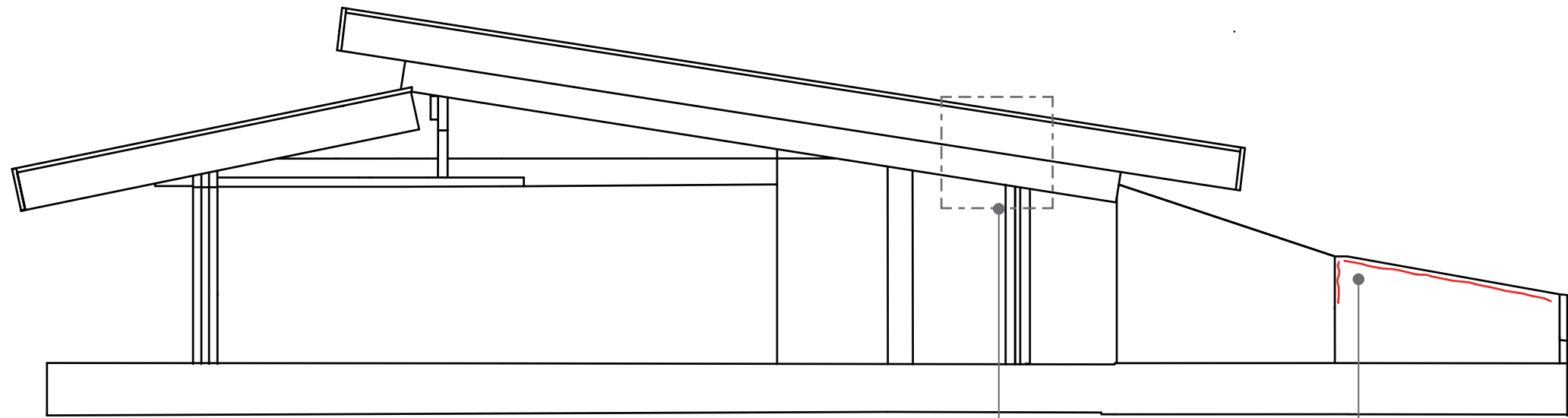
**06** UNIT 2 SECTION (LOOKING WEST)  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG



- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion



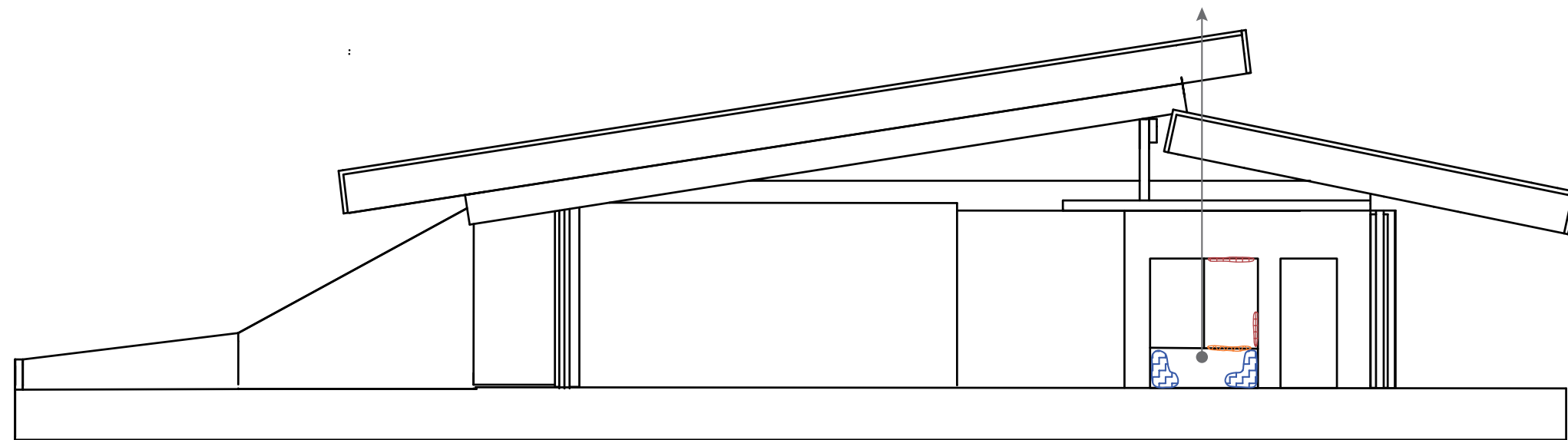
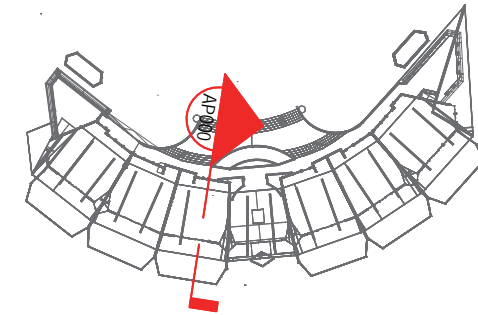
- DANIEL MANGONO
- TAHA MUGHAL
- FLORENCE (JUN-AI) WANG
- MILES (CHENGJUN) WU
- DIYI ZHANG



07 UNIT 4 SECTION (LOOKING EAST)

SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG

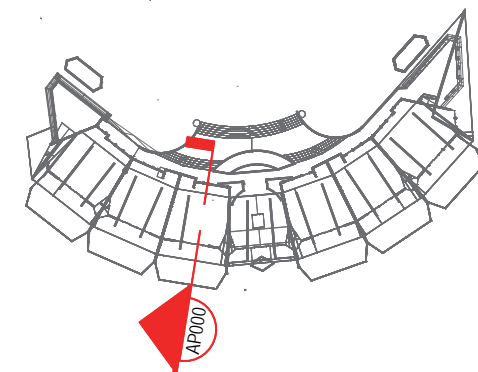
Water infiltration occurs at the east-south corner between the ceiling and the walls.



08 UNIT 4 SECTION (LOOKING WEST)

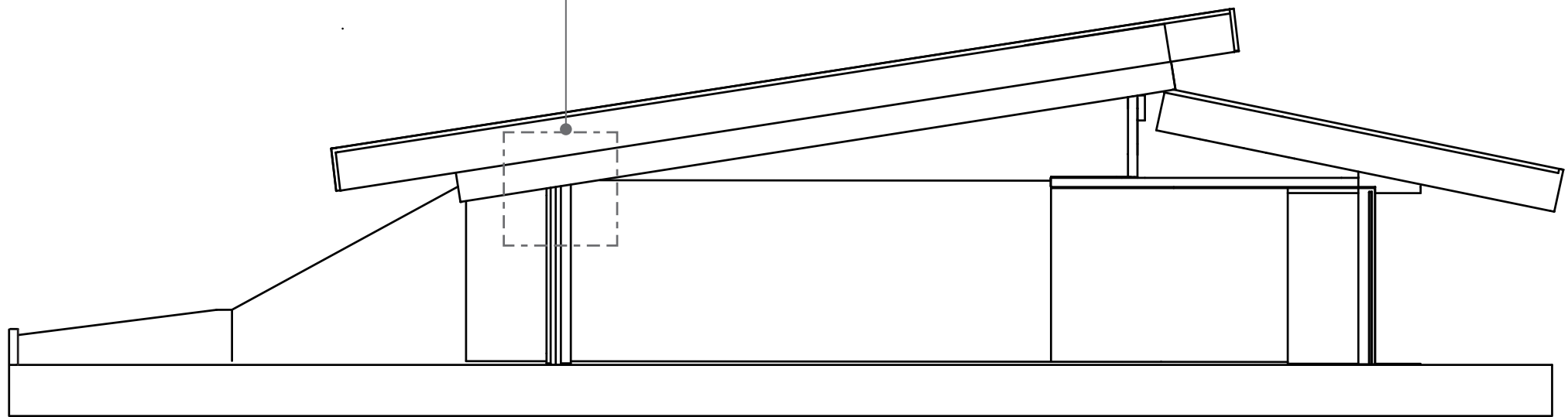
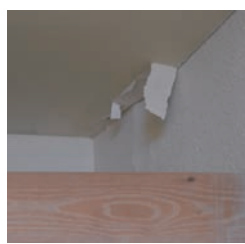
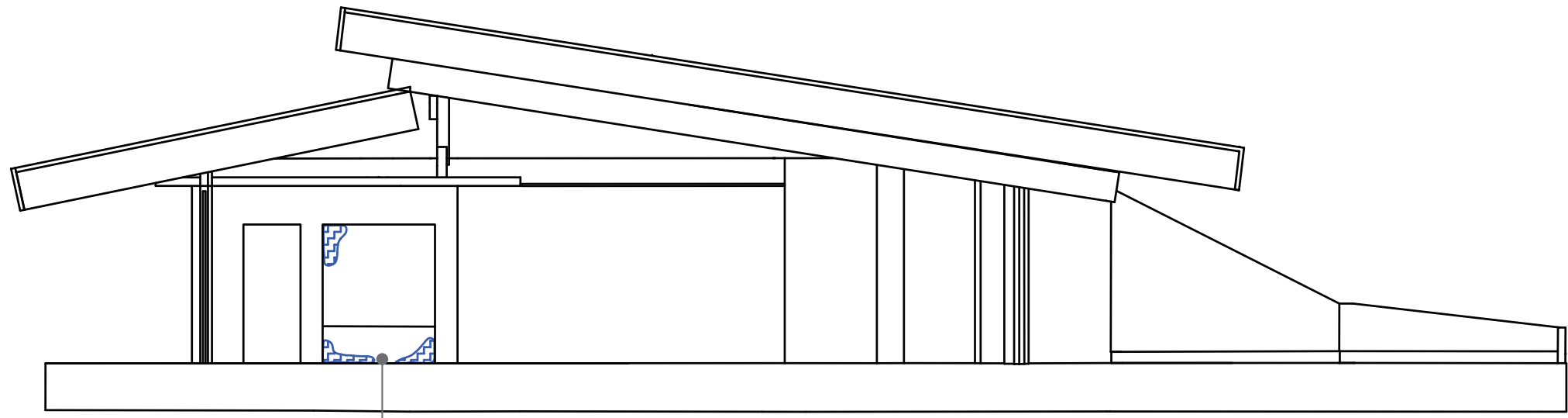
SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG

There might be pipe leaking problems around the mechanical room, causing water damage, and causes cracks, staining, flaking, missing materials, corrosion, and mold.

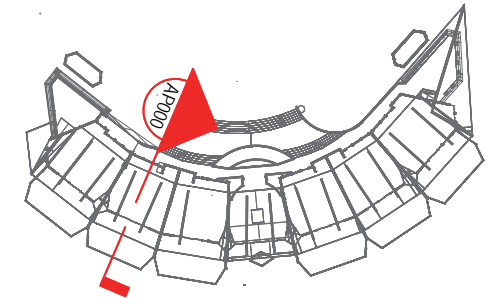


- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion



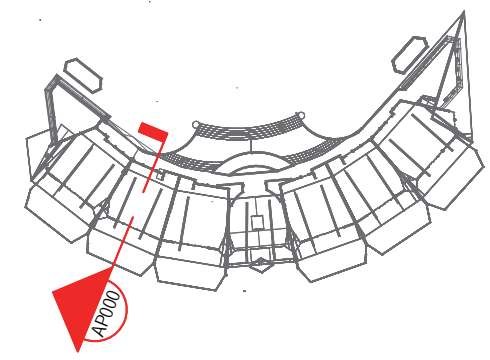


09 UNIT 5 SECTION (LOOKING EAST)  
SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG



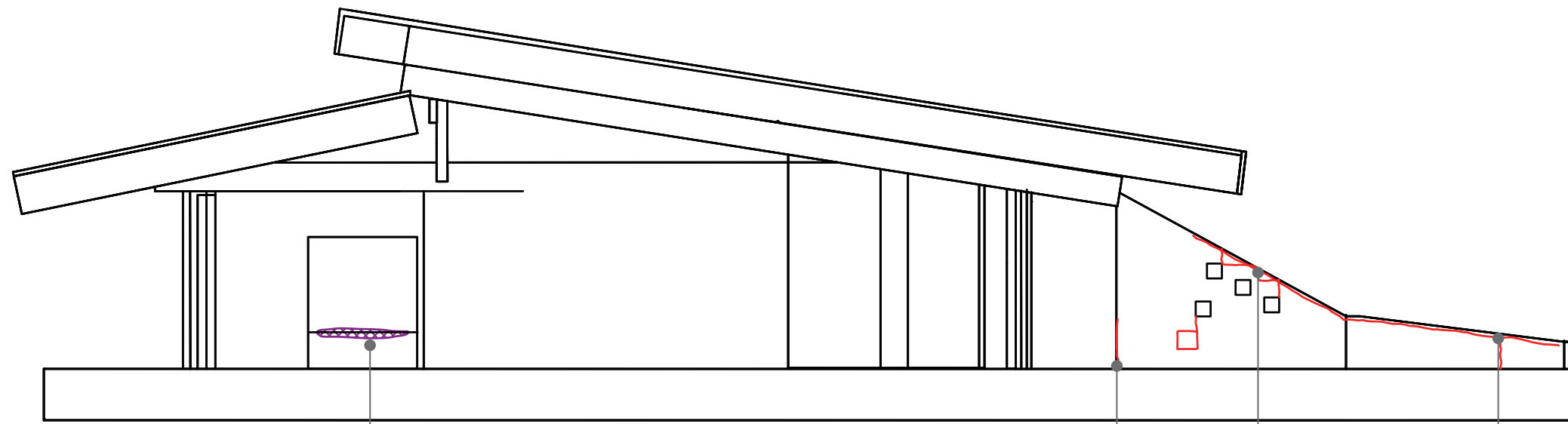
10 UNIT 5 SECTION (LOOKING WEST)  
SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG

Flaking, staining, and water infiltration occur at the southwest corner beneath the ceiling.

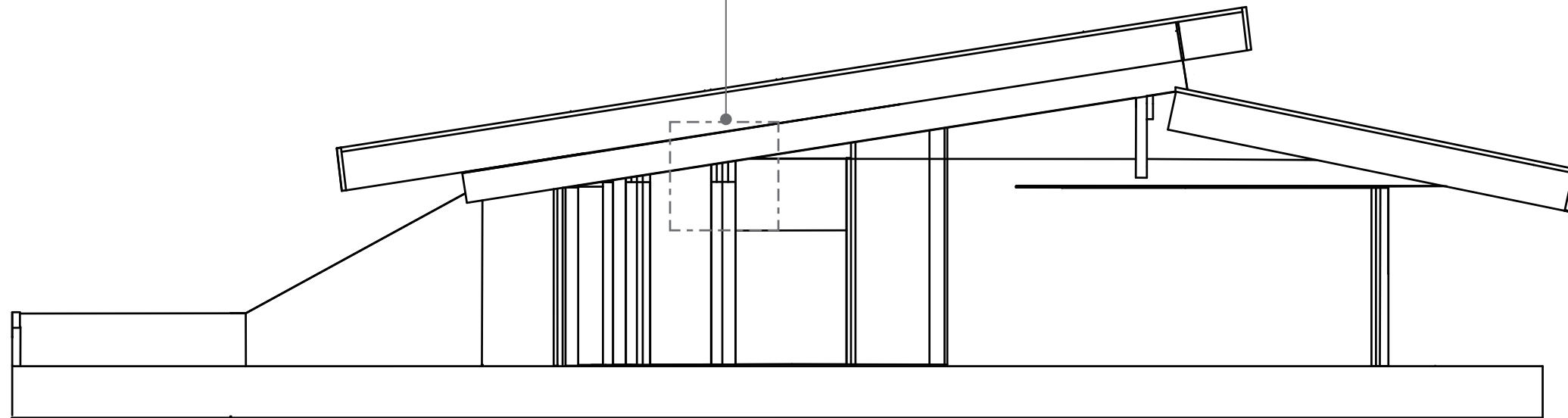
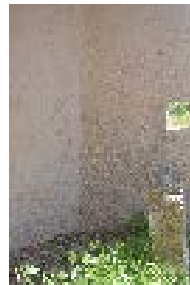
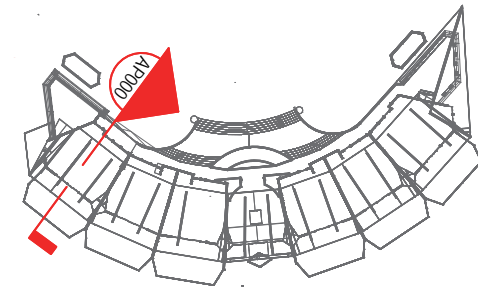


- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

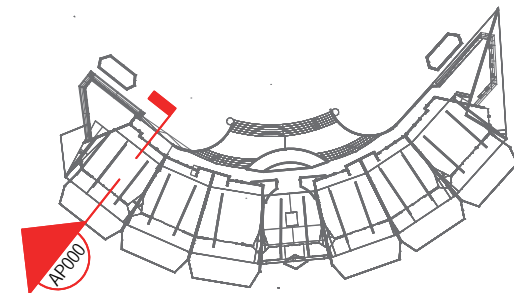




11 UNIT 6 SECTION (LOOKING EAST)  
SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG

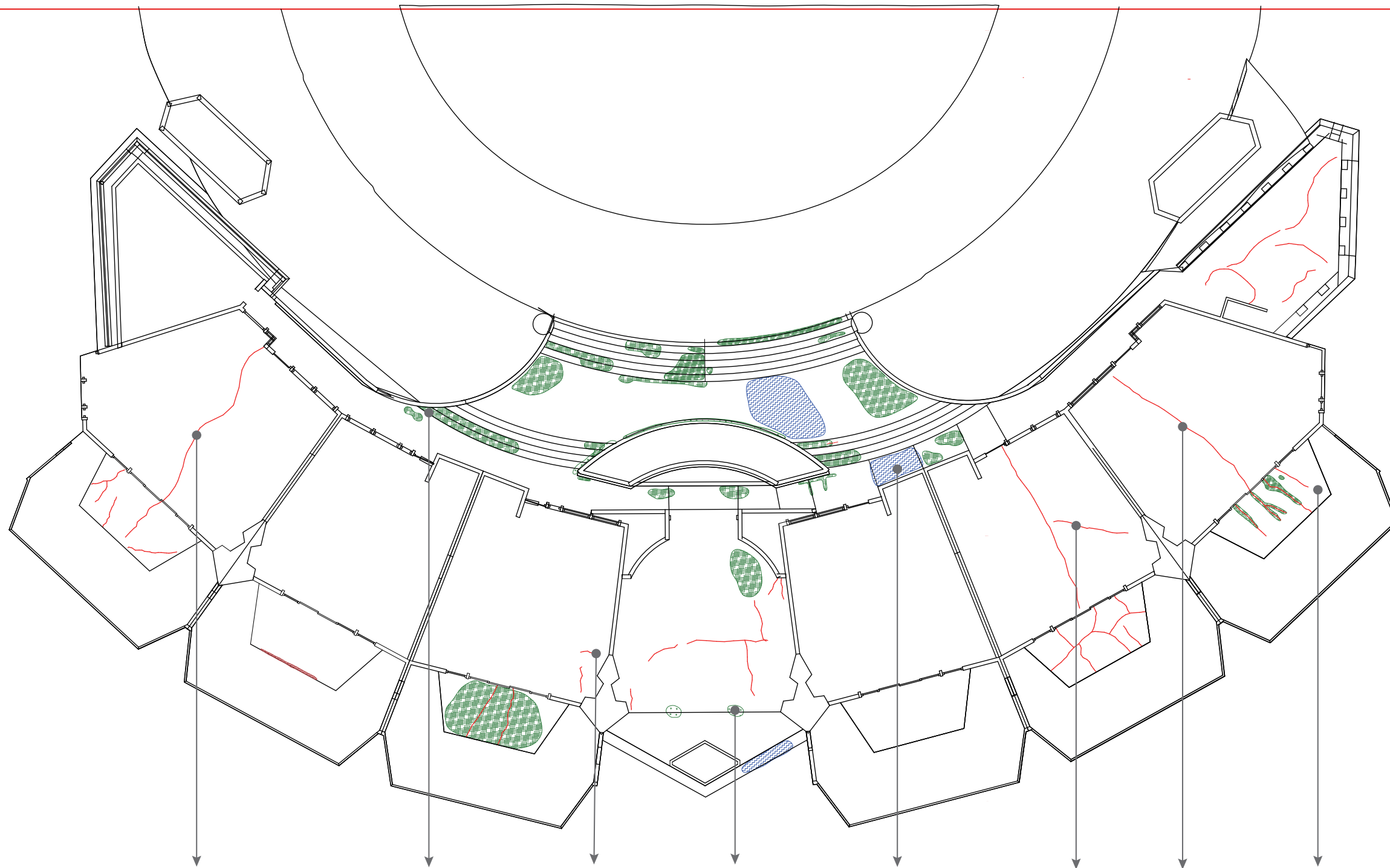


12 UNIT 6 SECTION (LOOKING WEST)  
SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG



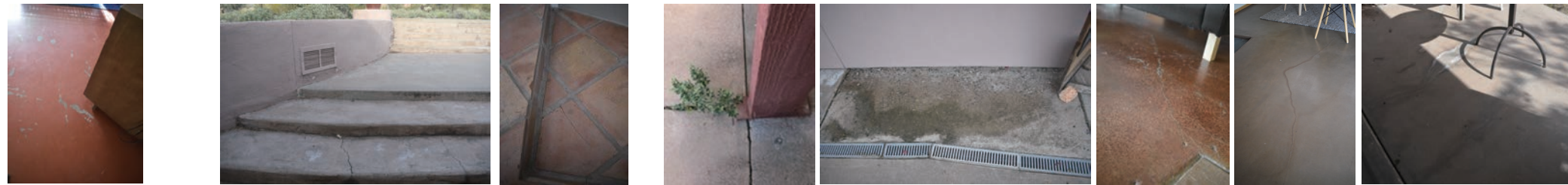
- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion



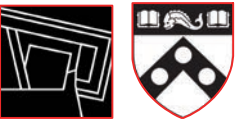


**01 FLOOR CONDITION**  
 SCALE: NOT TO SCALE  
 DRAWN BY: FLORENCE WANG

Most of the condition on the floor happens in outdoor areas, including the stairs, covered patio, and terrace of each unit. The condition is majorly related to water damage, such as efflorescence and water infiltration. In the indoor space, a few cracks can be observed on the floor, and some longer cracks extend throughout the terrace and indoor.



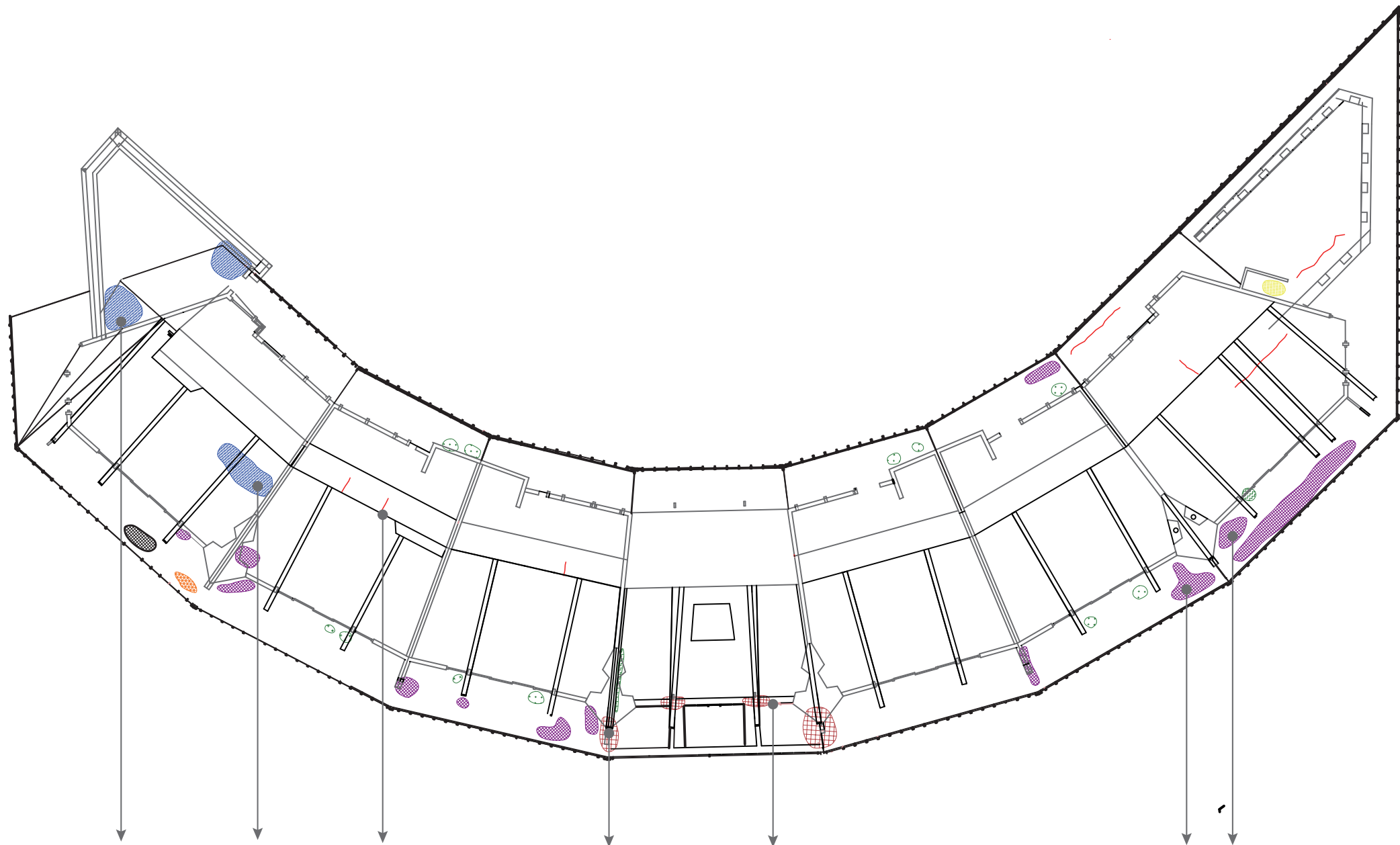
— Crack   
  Efflorescence   
  Staining   
  Flaking   
  Water Infiltration   
  Biological Growth   
  Corrosion





02 CEILING CONDITION  
SCALE: NOT TO SCALE  
DRAWN BY: FLORENCE WANG

Most conditions on the ceiling happen in outdoor areas, especially eaves on the terraces. The condition may be caused by moisture and lack of maintenance, leading to flaking, staining, and some biological growth. The water damage is most serious in the laundry room, with severe water infiltration on the exposed structure.



- Crack
- Efflorescence
- Staining
- Flaking
- Water Infiltration
- Biological Growth
- Corrosion

Capstone Studio: Taliesin West  
Crescent Building Condition Report

12621 N Frank Lloyd Wright Blvd,  
Scottsdale, AZ 85259

Group Members:

DANIEL MANGONO  
TAHA MUGHAL  
FLORENCE (JUN-AI) WANG  
MILES (CHENGJUN) WU  
DIYI ZHANG

CEILING CONDITION

DRAWN BY: FLORENCE WANG  
DATE: 4/9/2023  
SCALE: NOT TO SCALE