ASHUR CLARK

architecture portfolio

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ARCHITECTURAL DESIGNER

EDUCATION

- **Rhode Island School of Design | 2024**
  - Bachelor of Architecture
  - Concentration in Nature, Culture, and Sustainability Studies (NCSS)

CERTIFICATIONS

- PHIUS Certified Passive House Consultant (CPHC)

SKILLS

- **3D Software:**
  - AutoCAD, Rhinoceros, Revit, V-Ray, Lumion, Enscape
- **2D Software:**
  - Adobe Creative Suite (Photoshop, InDesign, Illustrator)
- **Environmental Performance Software:**
  - ClimateStudio, WUFI Passive
- **3D Design / Modeling:**
  - Model-making, Woodworking, Metalworking
- **2D Design:**
  - Drawing, Painting, Photography
- **Microsoft Office:**
  - Excel, Word, PowerPoint

ABOUT ME

Innovative and detail-oriented Architectural Designer with experience designing residential spaces. Passionate about aesthetics, architectural details, environmental impact, and material use. Skilled in concept development, model-making, fabrication, technical drawing, and client collaboration throughout all project phases.

WORK EXPERIENCE

Jarret Yoshida Inc.
Architecture and Interior Design Intern
Brooklyn, NY | 2023

- Developed design proposals for residential interiors which were accepted by clients.
- Generated floor plans, elevations, electrical plans, and plumbing plans.
- Contacted vendors for quotes, selected furniture, appliances, hardware, and tile, and generated schedules accordingly.
- Lead presentations to clients.
- Conducted site visits and took measurements.

Rhode Island School of Design
Architecture Department Wood Shop Monitor
Providence, RI | 2021-2024

- Assisted other students in model-making.
- Demonstrated skilled use of woodworking machinery (table saw, band saw, drill press, sanders, jointer, planer, etc.)
- Maintained shop and machinery, and made machine repairs.

ACHIEVEMENTS

- Selected for an Artist Residency at the Domaine de Boisbuchet in Lessac, France | 2024
- Finalist for FD23 Market Stall Design Competition | 2023
- Honors designation at Rhode Island School of Design GPA: 3.73 | 2022-2024
- Selected from a large applicant pool to participate in travel course, "Hawai'i: Art and Science of Conservation" 2023

CONTACT

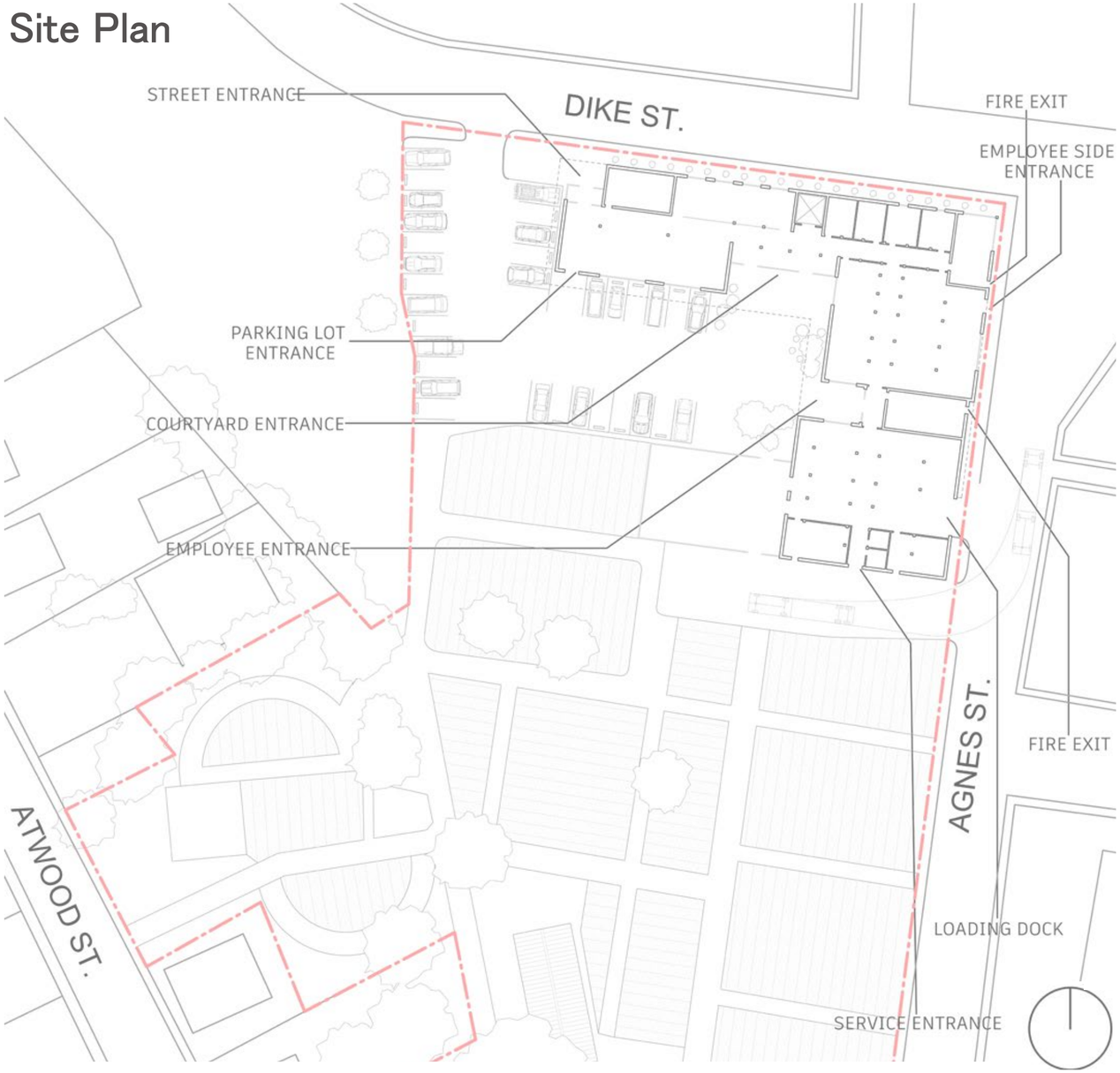
(860) 617-7114
ashurclark.com
ashurtc01@yahoo.com
instagram.com/ashurclark
Storrs, CT
linkedin.com/in/ashurclark

CONTENTS

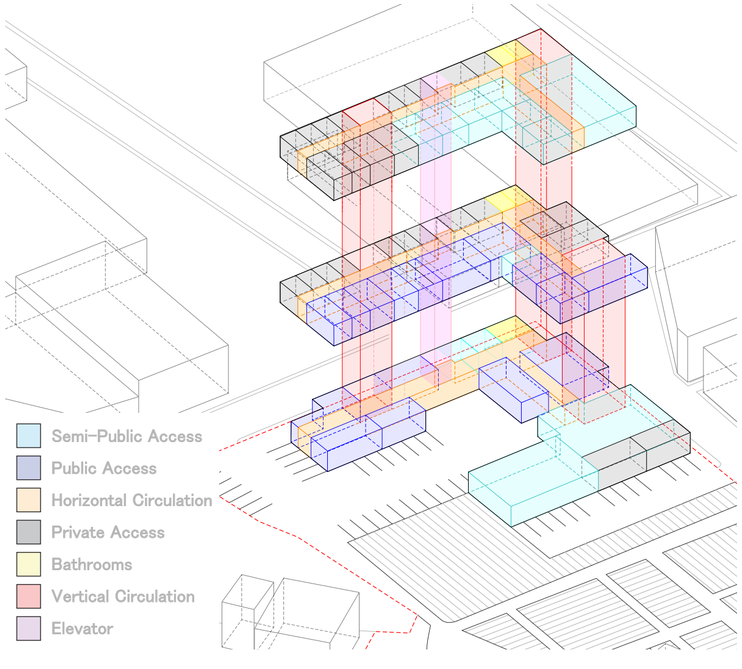
01: WHAT CHEER FLOWER FARM

The What Cheer Flower Farm is a studio design project located in Olneyville, Rhode Island, and done in collaboration with Michael Hothan, Gabe Lei, and Jiahao Zhang. A set of paramaters and a program were given, and the goal of the project was to design a 38,000 ft^2 multi-use flower processing and educational facility, while adhering to building codes, implementing practical and energy efficient structural and mechanical systems, and employing a unique design upon a facility that serves the community. The realistic scope of this project helped us to develop our technical representation abilities.

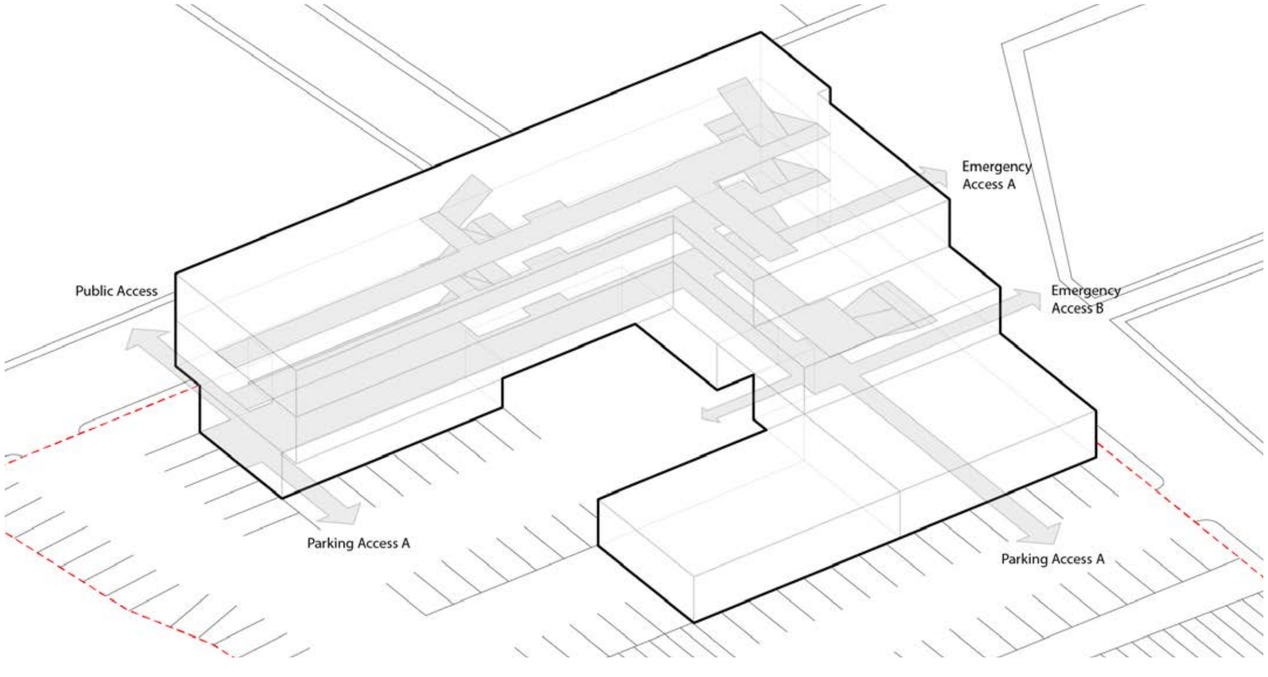
Site Plan



Program and Massing Diagram



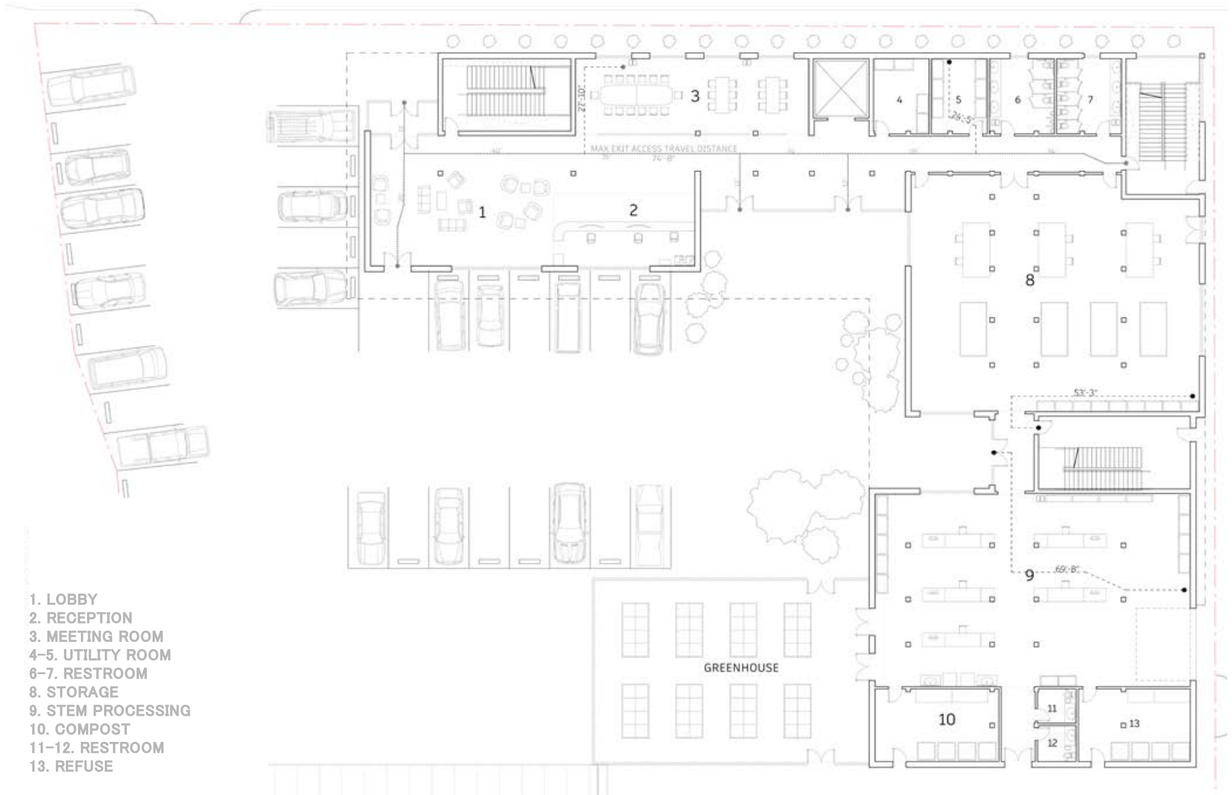
Building Access



Interior Renders

This building is comprised of two main programs – the educational spaces, and the industrial spaces. The industrial spaces are on the ground floor (below) and are for the processing and distribution of flowers from the neighboring flower farm. The educational spaces are on the upper floors which contain classrooms, workshops, terraces, and a café.

Ground Floor Plan



1. LOBBY
2. RECEPTION
3. MEETING ROOM
4–5. UTILITY ROOM
6–7. RESTROOM
8. STORAGE
9. STEM PROCESSING
10. COMPOST
11–12. RESTROOM
13. REFUSE

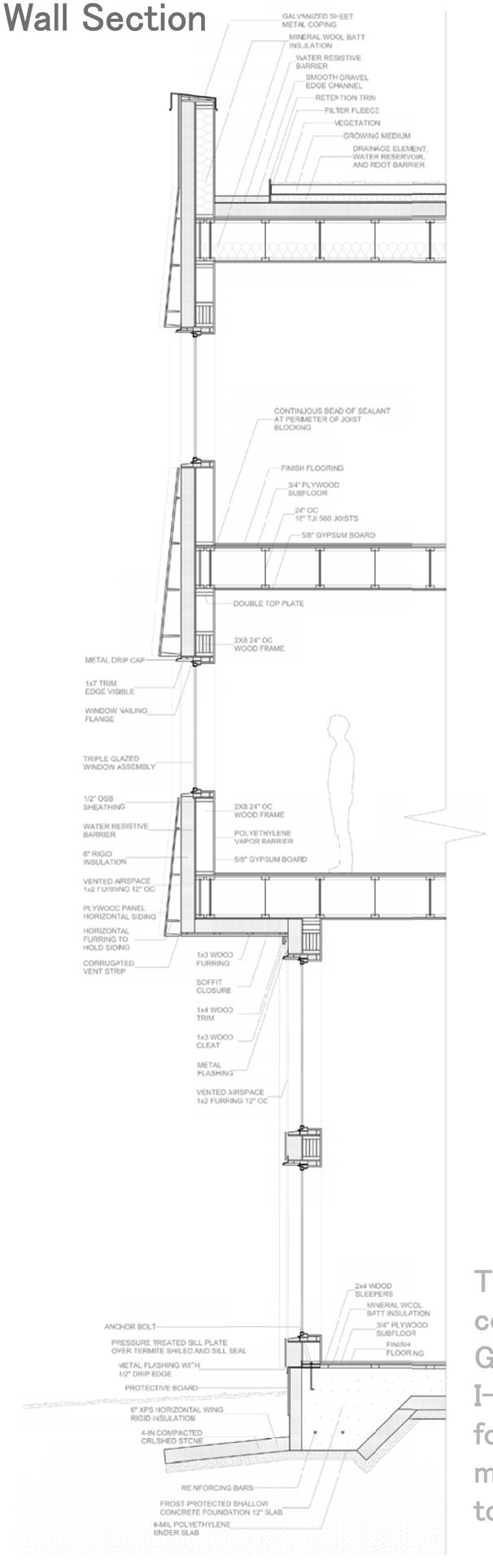
Third Floor Plan

1–2. EXECUTIVE OFFICE
3–4. MULTIPURPOSE ROOM
5. CONFERENCE
6–12. OFFICE
13. CONFERENCE
14. RECEPTION/SUPPORT
15. MECHANICAL
16. OFFICE
17–18. RESTROOM
19. OFFICE
20–21. UTILITY
22. RECEPTION/SUPPORT
23. BOARD ROOM
24. UTILITY
25. LECTURE ROOM
26. TERRACE

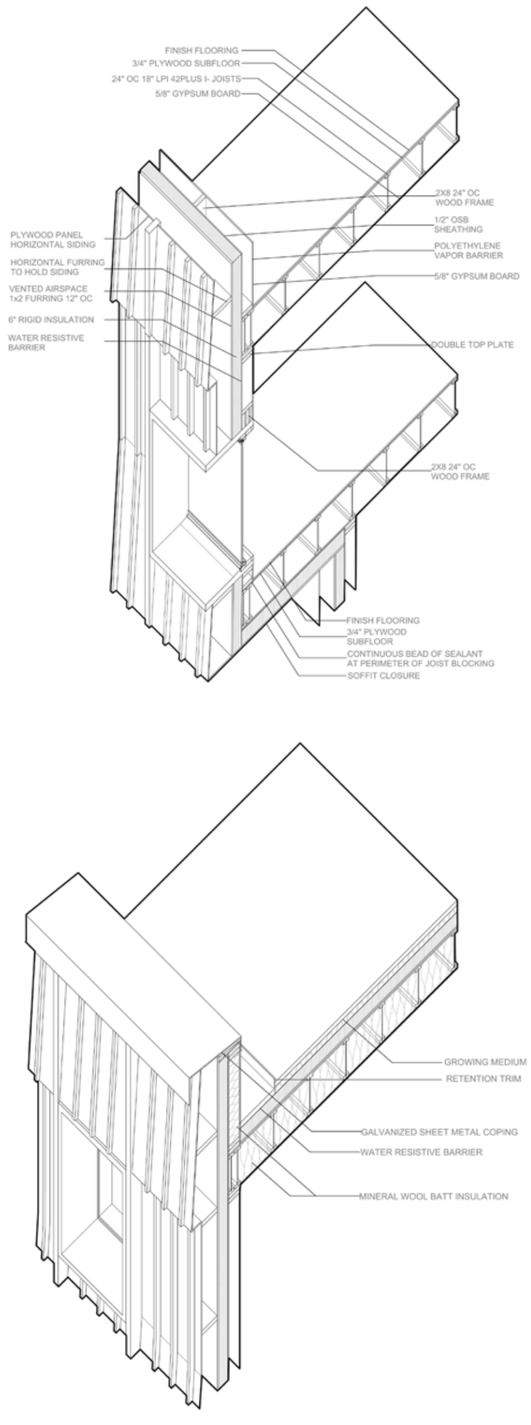
Second Floor Plan

1–5. CLASSROOM
6–12. OFFICE
13. BREAKOUT/LOUNGE
14. WAITING/LOUNGE
15. MECHANICAL
16. OFFICE
17–18. RESTROOM
19. OFFICE
20. ADMINISTRATION
21–22. UTILITY
23–24. WORKSHOP
25. STUDENT CAFÉ
26. TERRACE

Wall Section



Section Axonometrics



The primary structure of the building consists of heavy timber framing with Glulam columns and girders and wood I-beam joists, atop a concrete slab and footing. A slatted facade is made from modular plywood panels and is intended to catch light and cast shadow.

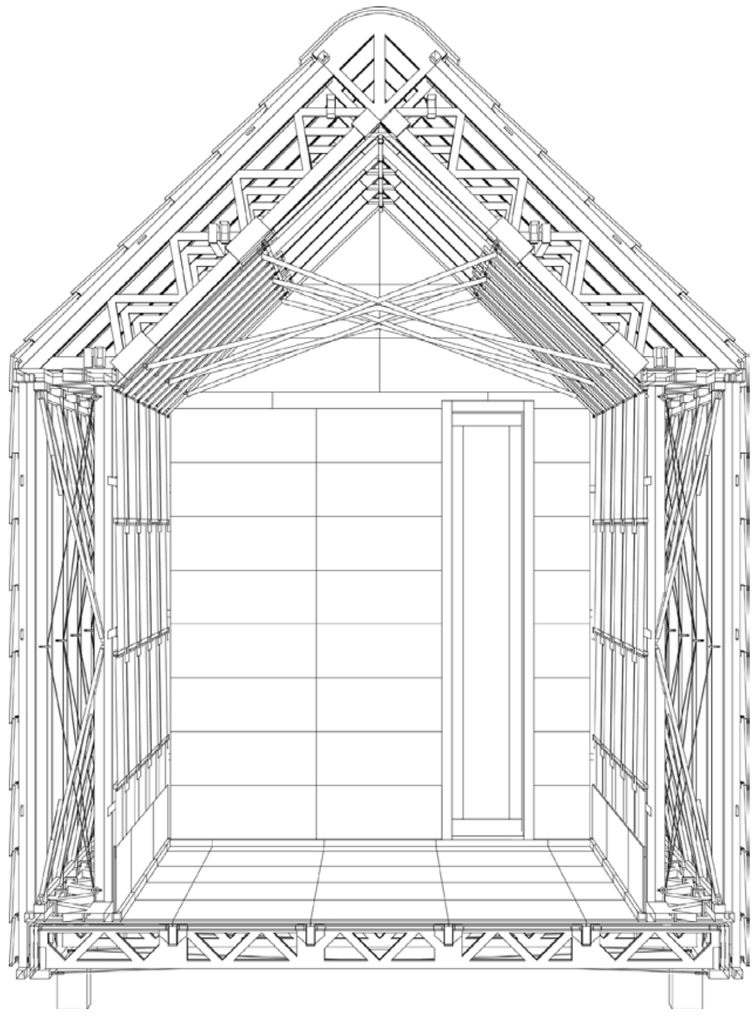
South Elevation

West Elevation

Wall Section and Facade Model

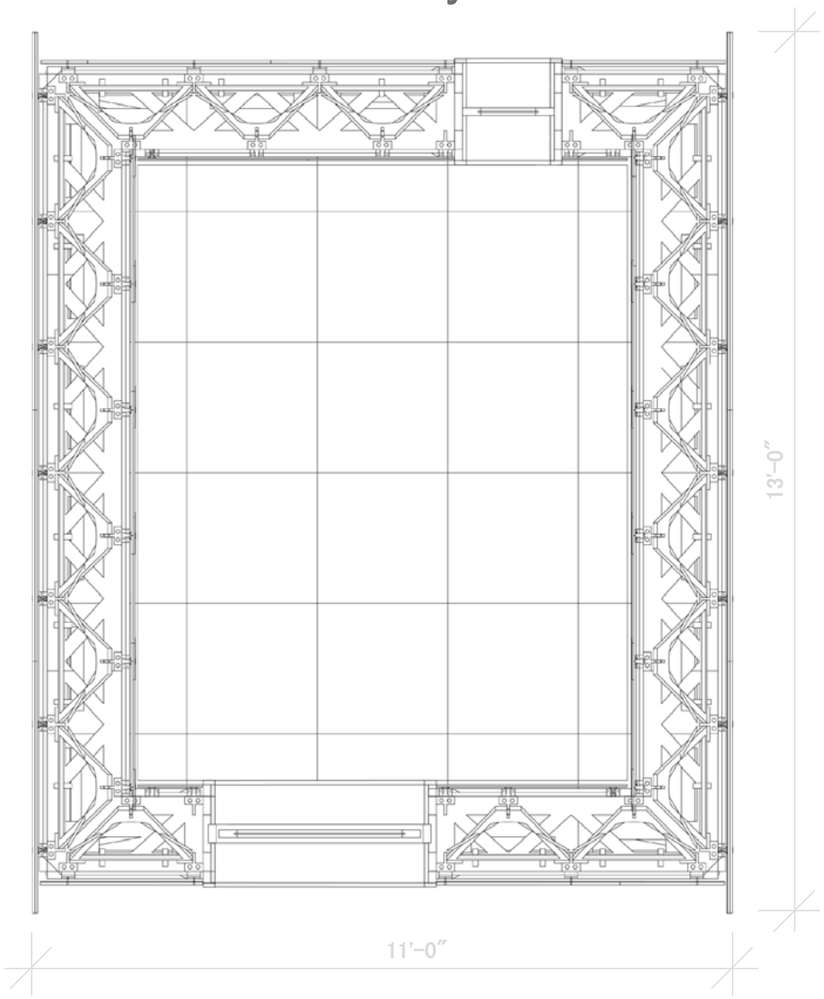
02: WALDEN 11

Wall Assembly Section



Walden 11 is a collaborative studio project with the goal of designing a modular building system that can be assembled and disassembled with ease. This modular assembly alters the longevity of building materials as it allows for components to be easily and independently modified and replaced. The design and fabrication of this project range in complexity from CNC-routed trusses, to a novel clip-on cladding system, to a ratchet strap wall system that all coalesce to demonstrate the potential for sustaimable design principles to coexist with advanced technology. The house was assembled and disassembled by a small group of students in less than a week.

Wall Assembly Plan



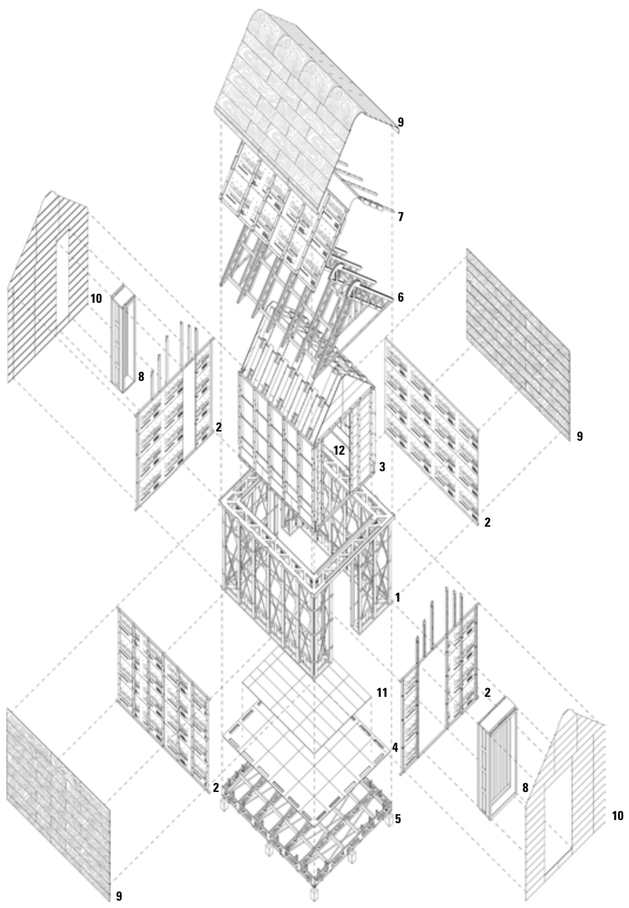
Exterior

Interior

Cladding System

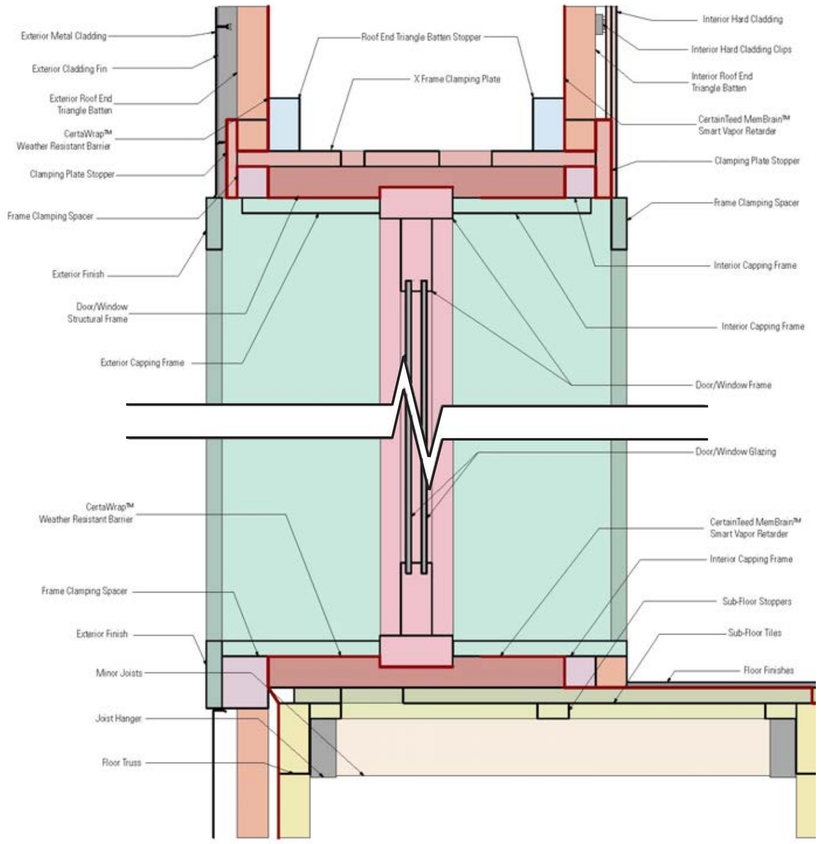
For this project, a new cladding system was invented which utilizes clips that are pushed into vertical battens and snap into place. The backs of the clips, which protrude from the battens, have different attachments that allow three different types of cladding to be installed. The boards of the exterior wood panel cladding (images 3 and 4) have small slits that the "Lapping Clips" lock into. The "Textile Clips" interlock with small square wood sections that tension the fabric (right of image 1). The "Standard Clips" are simply screwed onto the backs of the interior wood panels (right of image 2).

Exploded Axonometric



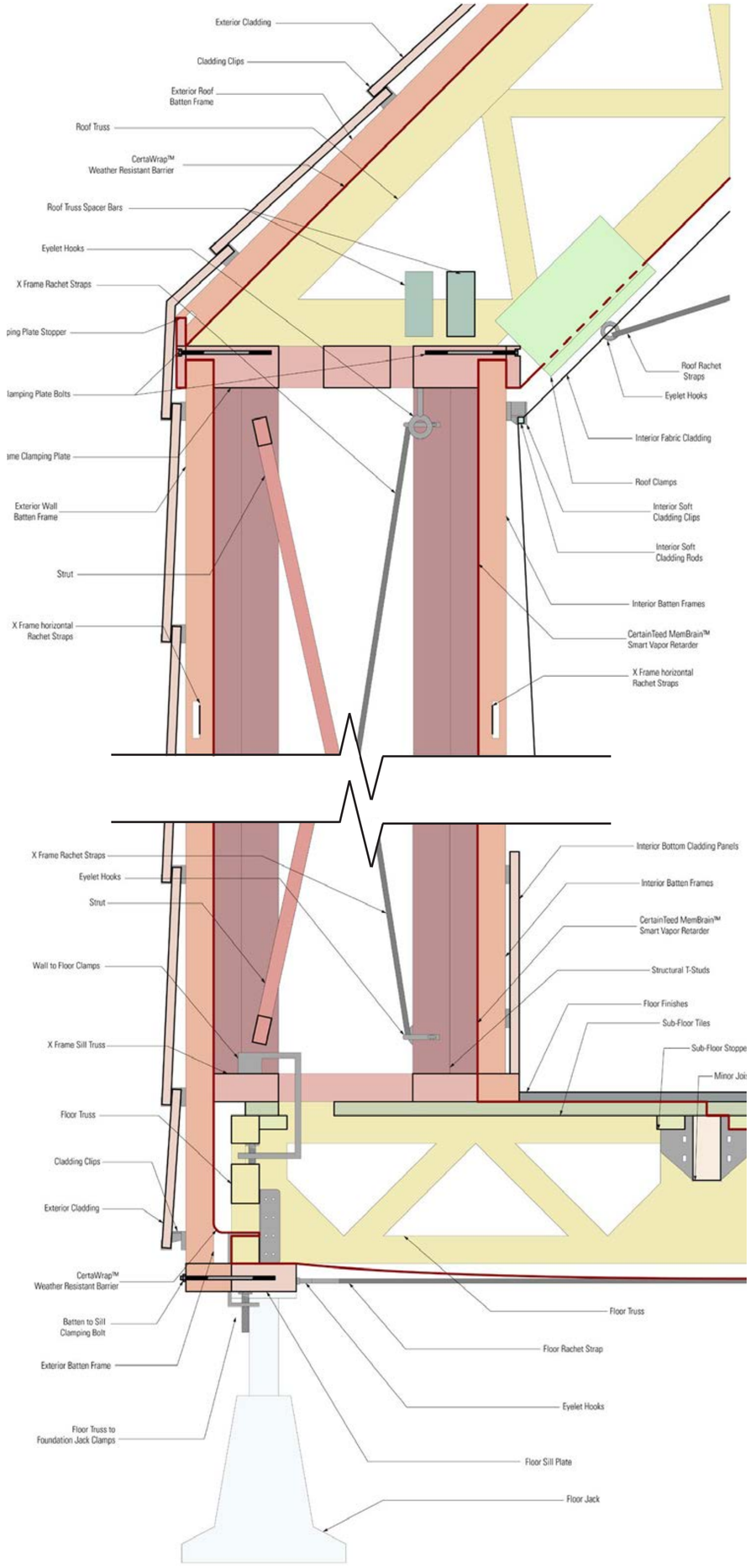
1. X-Wall System
2. Exterior Batten System
3. Interior Batten System
4. Sub-Flooring
5. Floor Structure
6. Roof Structure
7. Roof Batten System
8. Opening System
9. Exterior Cladding Type 1
10. Exterior Cladding Type 2
11. Floor Finish
12. Interior Cladding

Glazing Section

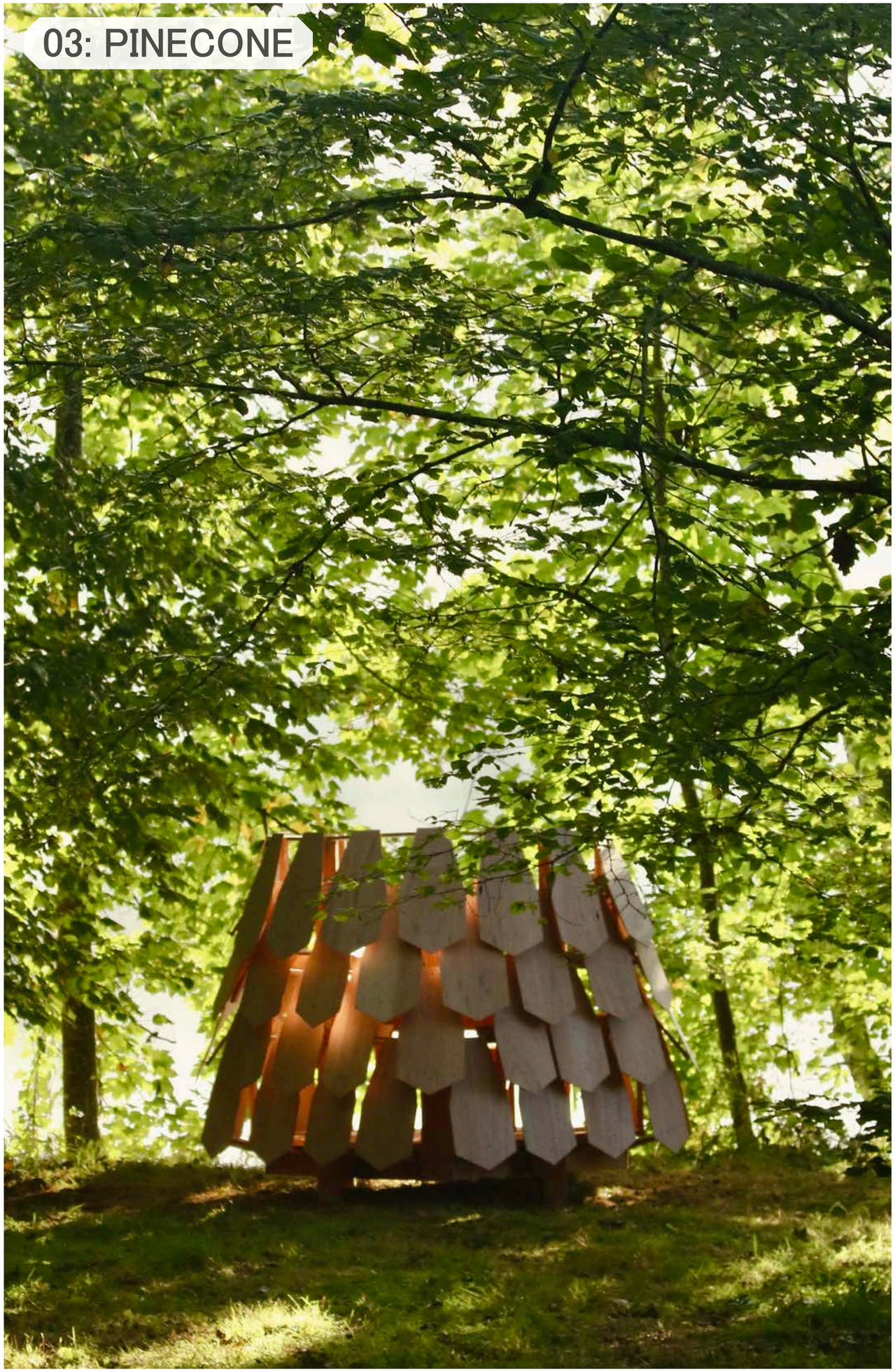


The primary structure of this project utilizes CNC-routed diagonal struts and tensioned ratchet straps to create a rigid wall. CNC-routed trusses form the roof, as well as the floor structure, which sits on a series of jacks. Certain connection details are constructed with clamps for ease of assembly and to ensure that the lapped WRB has no perforations. No components are nailed together and screws / bolts are used minimally.

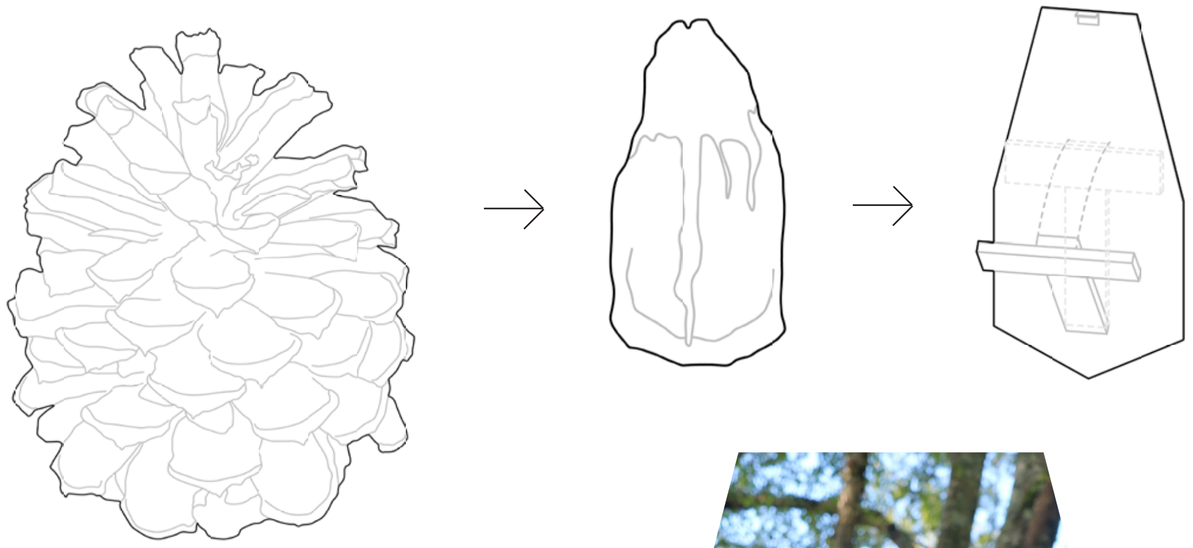
Wall Section



03: PINECONE

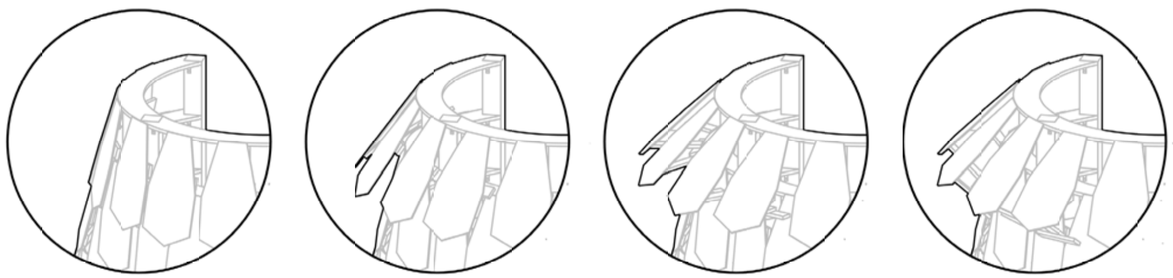


Panel Form

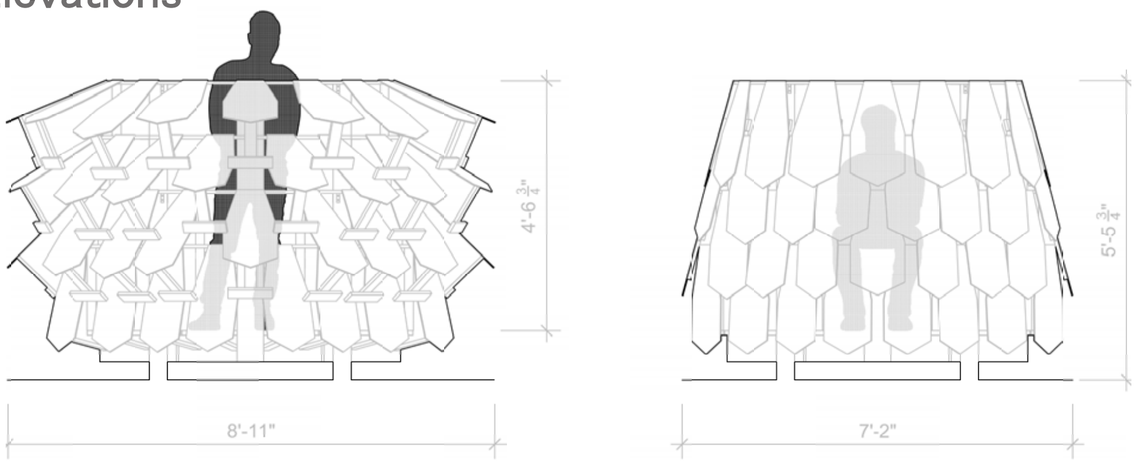


"Pinecone," inspired by its namesake, is a private nature viewing platform and reflection space. Positioned due east before the Vienne River in Lessac, France, its scaled facade can be manually adjusted with hinges and props to control light, wind, and privacy conditions. Inside, a single chair offers a solitary occupant an unobstructed view of the river and surrounding trees, offering a serene and immersive connection with nature.

Panel Opening

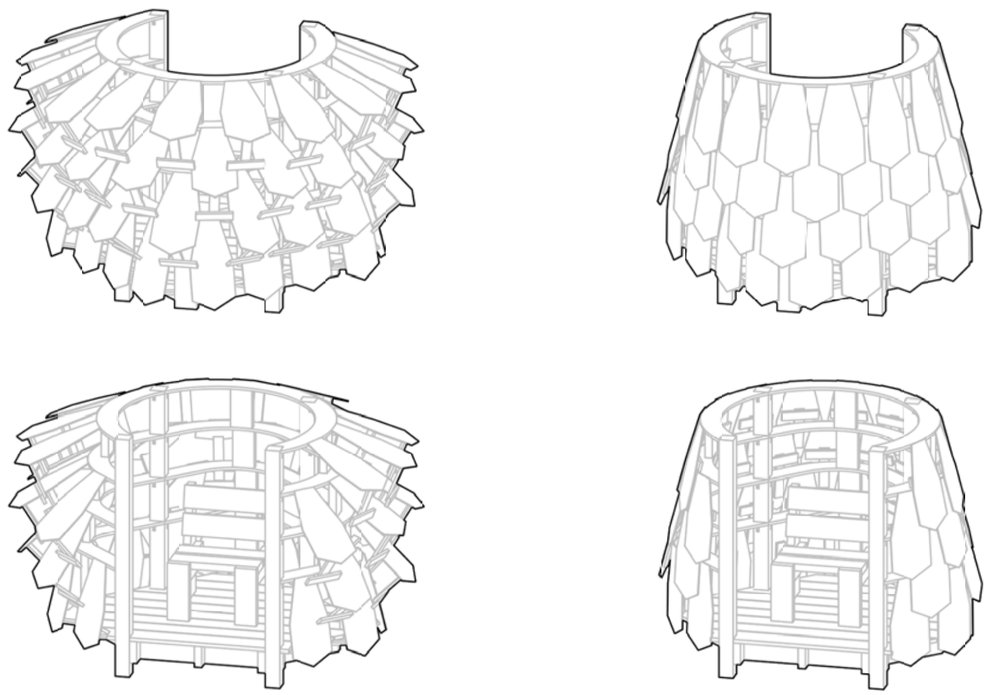


Elevations

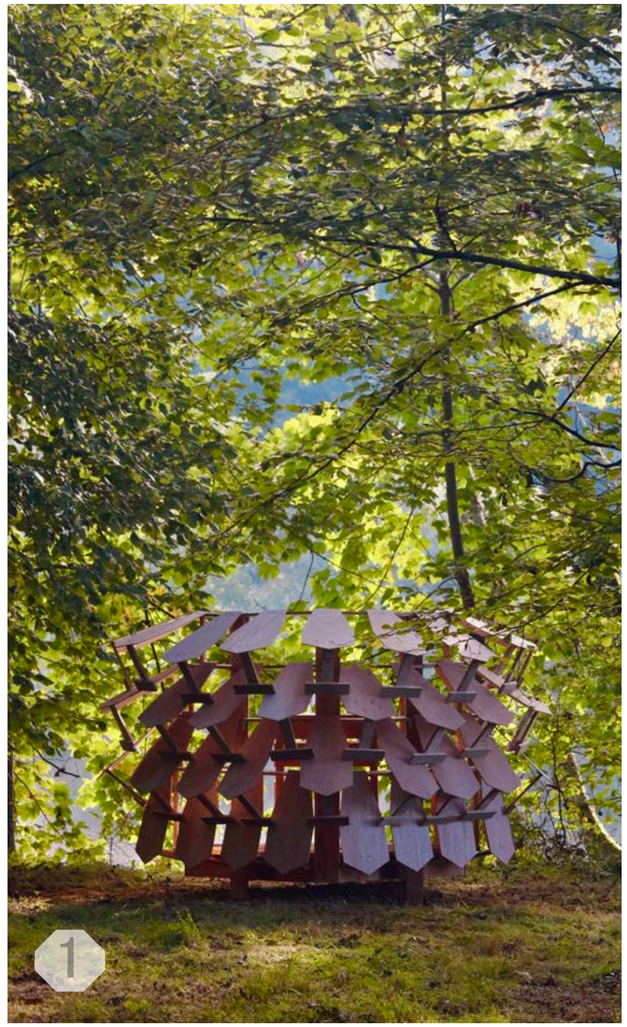


Measuring 4'–6" (1.37m) from the structure's floor to its top, "Pinecone" is meant to allow occupants to see over the top of it while standing inside, and to stay out of view and nestled within it while seated.

Axonometrics

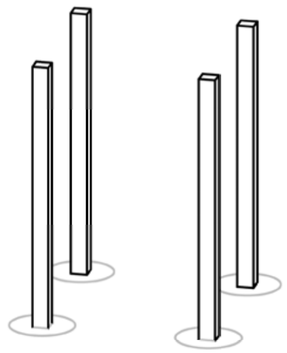


Each panel can be opened and propped independently, and bears on the panel(s) below it, allowing for fine control over the facade's conditions by the occupant (facade in fully "open" position in image 1). When closed, the props attached to each panel fold in and upwards and rest on the frame. The members comprising this "shell frame," onto which the panels are installed, are 5-1/2" (14cm) wide, providing shelf space for small personal items (close-up in image 3). One of the four faces of the structure is completely open, which serves as the entrance to the "Pinecone," as well as the framed view to the Vienne river (view from a seated position inside in image 2).

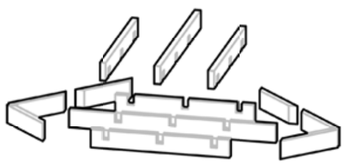


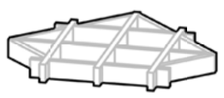
Assembly

1: Post holes, 13″ (34cm) in diameter, dug at a depth of 3'-3″ (100cm). Hole centers are spaced 40″ (102cm) apart from each other in a square.

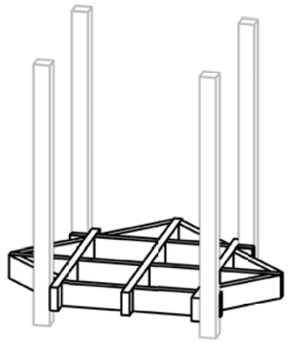


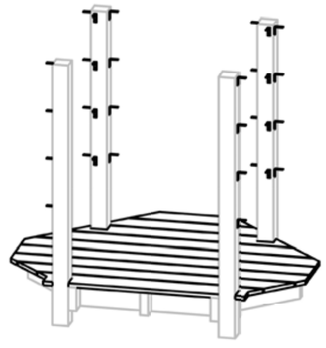
2: 4″ (10cm) of gravel tamped into bottom of post holes and 4″ x 4″ (10cm x 10cm) posts set into holes, which are then backfilled with gravel.





3: Base frame (constructed with lapped joint members and diagonal bracing, then screwed together, shown above) installed with construction screws onto posts, 4″ (10cm) off of the ground.



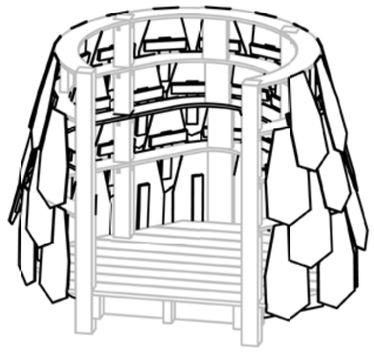


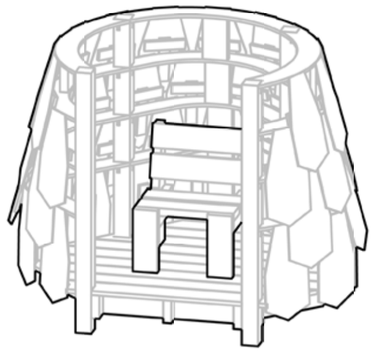
4: ″L″ brackets installed in 1' (30cm) increments from top of posts. 1″ x 6″ (2.5cm x 15cm) decking boards cut to size and installed with construction screws onto base frame.

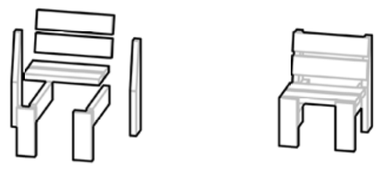
5: Shell-like members, made from 3/4″ (2cm) plywood installed with screws onto ″L″ brackets on posts, forming a frame onto which panels will be installed.

6: Vertical bracing members, made from 1″ x 6″ (2.5cm x 15cm) decking boards, installed onto the ″shell frame.″

7: Pre-assembled panels installed onto ″shell frame″ with screws and hinges.

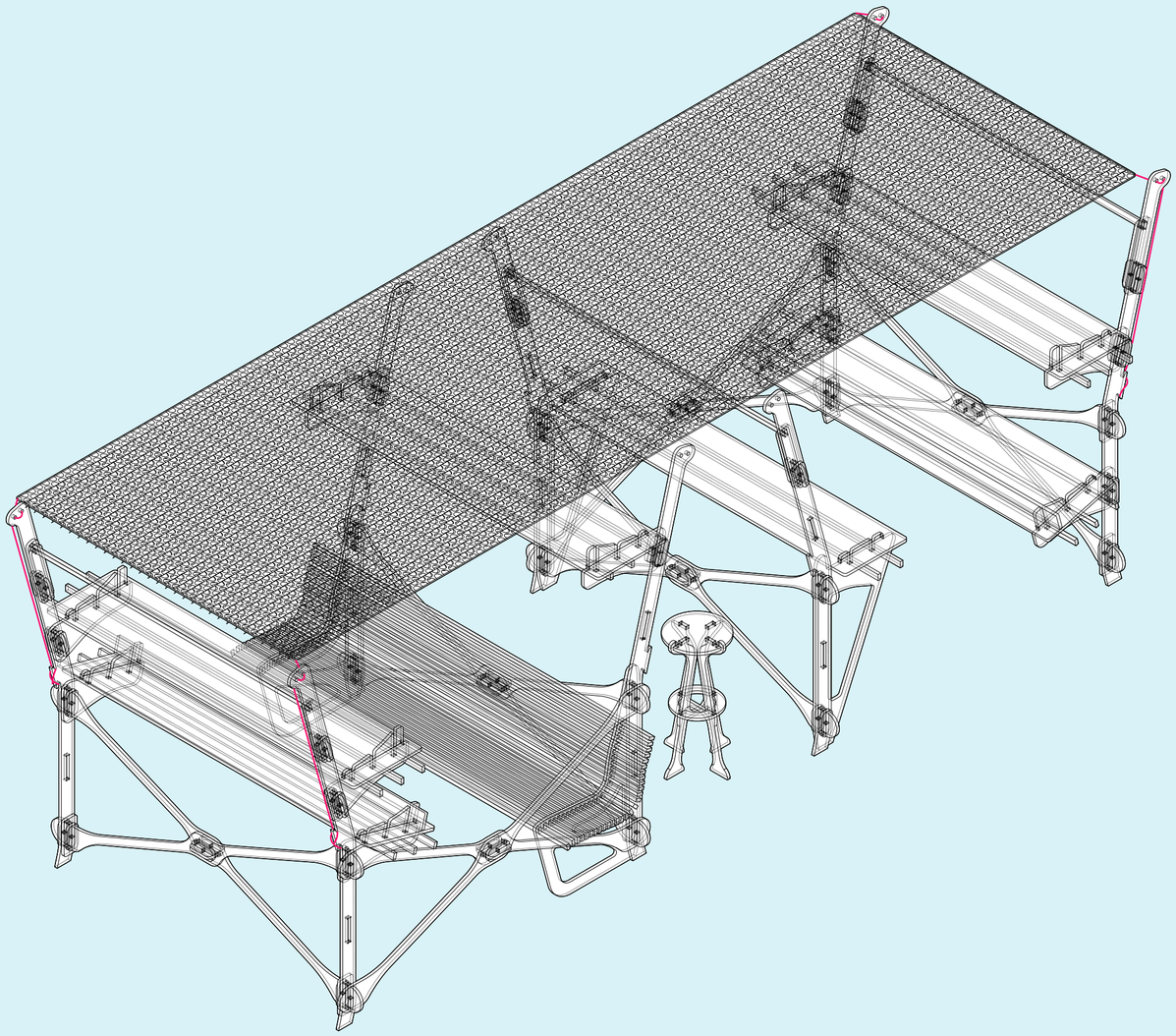






8: Chair (members screwed together, seen above) placed onto deck floor free-standing.

04: GROW STALL



GROW STALL is an easy-to-assemble, lightweight structure for displaying and vending goods. It consists of a lightweight X-Frame scaffolding that can be outfitted with modular shelving and seating units with simple attachments.

The structure was inspired by construction scaffolding in New York City, which is always lightweight and quickly disassembled.

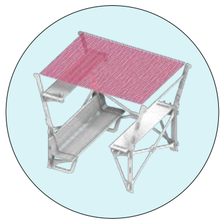
This project was created to provide an easy-to-construct alternative to the traditional market stall, often consisting of a fold out table and a collapsible tent. The goals for this project were to minimize the use of hardware, be easy to assemble and disassemble for all ages (particularly those over 50), be able to be digitally fabricated in order to remain open-source so that the design is accessible to everyone, all while maintianing unique character and functionality as a market stall with seating, shade, and table or vending space.

This project is a collaboration with Oliver Jacob and Aliah Werth, and was selected as a finalist for the Better Block FD23 (Fabrication Day '23) design competition.

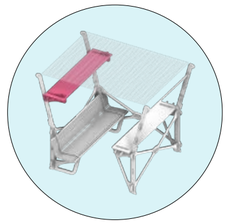
GROW STALL consists of diagonal braces we have named "X-Braces" which hold together the vertical "Y-Post" members. These posts grow outwards towards the top to increase the area of the "Sun Shade," and slots on the posts accept attachments – shelves, benches, and tables – that can face inwards or outwards to best fit the users needs.

GROW STALL is meant to democratize the market stall – design should be accessible to everyone.

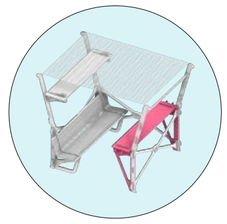
Furthermore, everyone should be able to participate in design – to that end, GROW STALL is meant to be a living document. In providing a lightweight structure, we hope others will design new attachments for the modular system and improve upon our "base model."



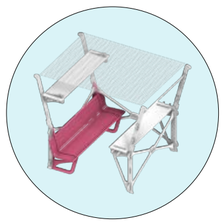
SUN SHADE



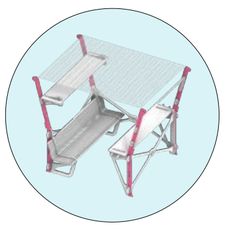
SHELF



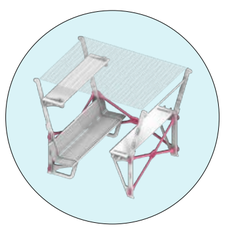
TABLE



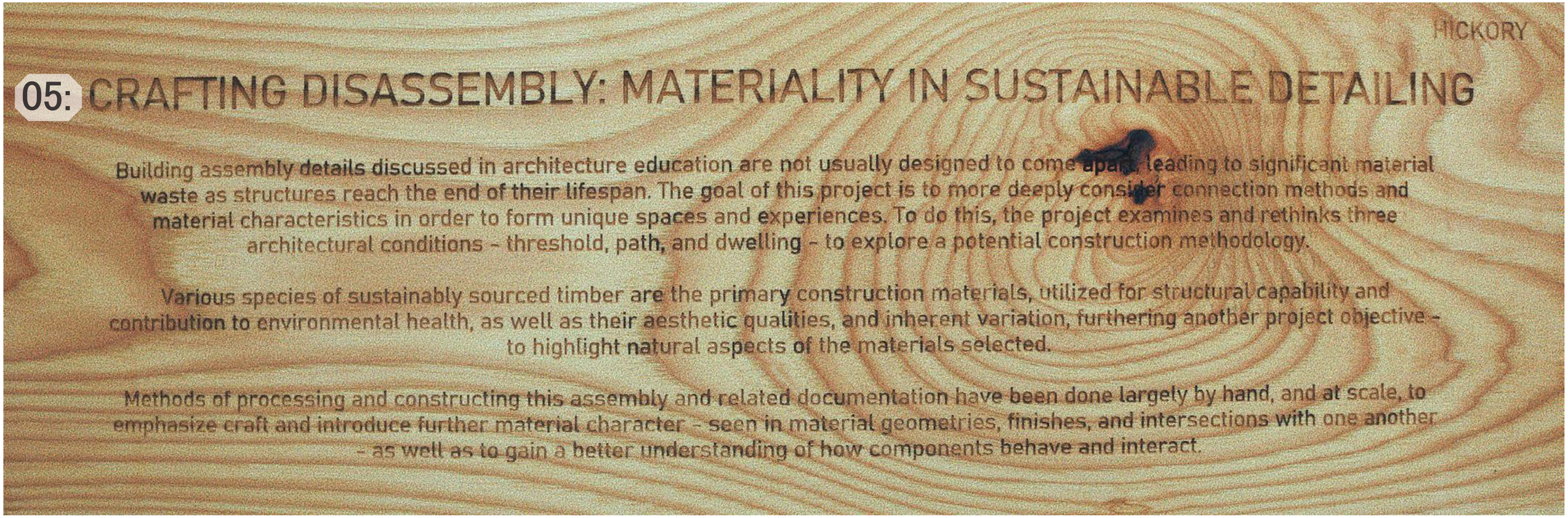
BENCH



Y-POST



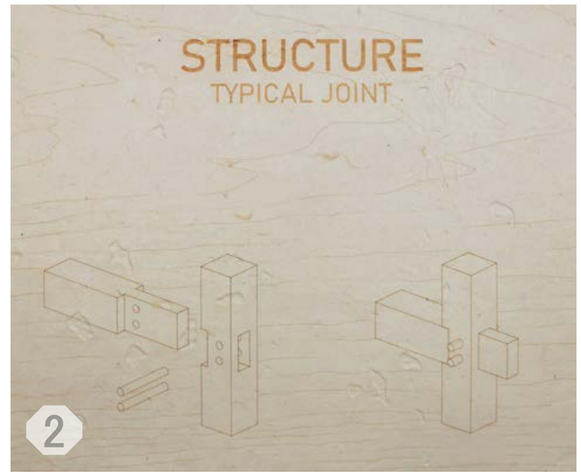
X-BRACE



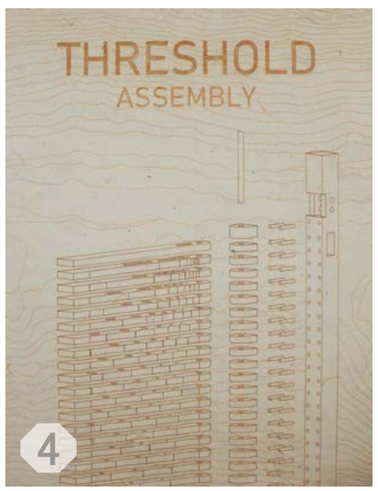
This ongoing project is a collection of research that I began gathering during my undergraduate thesis. My aim is to look into connection methods and materials, and consider ways to sustainably re-introduce elements of craft into architecture. The work I presented for my thesis involved a design for a three-element structure consisting of a door, a staircase, and a viewing platform. This design was laser engraved onto wooden panels (left side of the next spread), the backs of which were laser engraved with the trace of the wood grain (images below), to more consciously notice and draw inspiration from their natural forms. Additional documentation for this presentation consisted of a series of exploded and assembled axonometric drawings, engraved into handmade paper, to diagramatically explain the assemblies of the various components (right side of the next spread). Current research (seen on later spreads) has consisted of material explorations across a range of media including drawing, blacksmithing, woodworking, and other methods of craft and design.

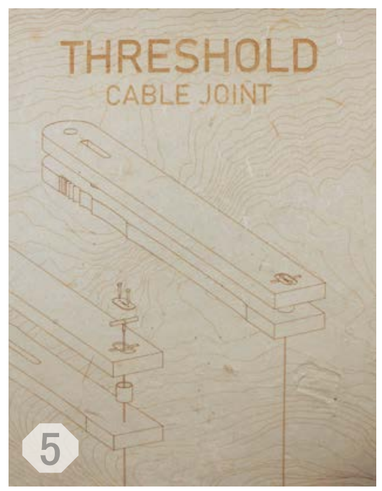



The first panel (1), made from red oak, shows the overall design of the structure with two axons on the left and right, and a plan drawing in the center, and the accompanying drawing (2) shows a pegged mortise and tenon joint, which was implemented into the design in multiple places.

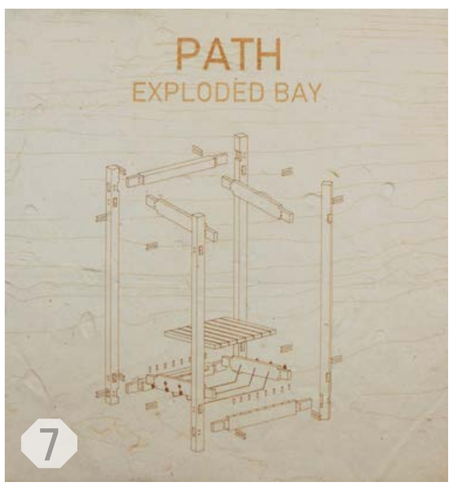


The next panel (3), made from curly maple, shows the design for the door, or "threshold," laid on its side, accentuating the curve that forms when pulling its handle, as it does not move as a single plane. The drawings (4 and 5) show the assembly and joints used to create the door.



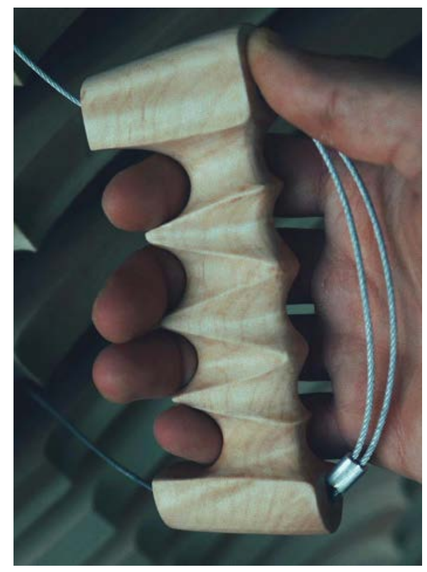


Next is the staircase, or "path," the panel for which (6) is made from poplar, and highlights the layout of the boards that form each step. The drawings (7 and 8) show the details of the first "bay" or unit of the structure exploded, and then assembled.

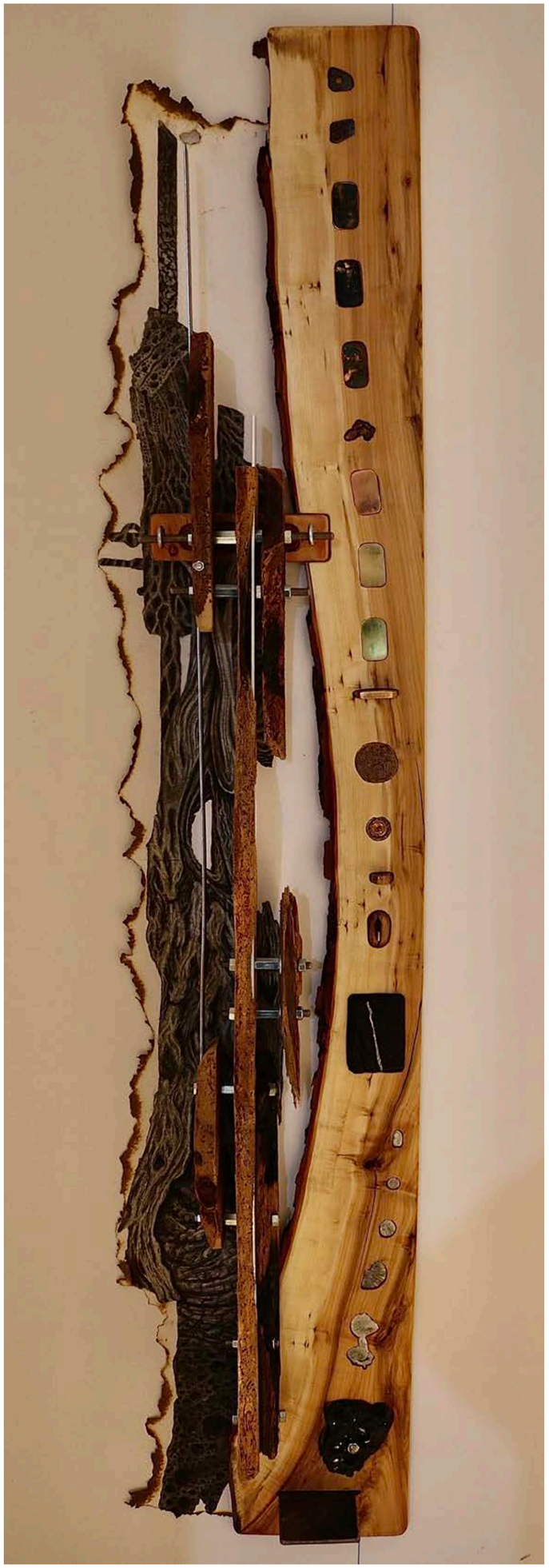


The final panel (9) is made from black willow and depicts a view from the upper platform or "dwelling." The drawing for this panel (10) shows the assembly of the chair that sits on this platform. The final drawing (11) shows a siding exploration that I designed for this structure.

The door was the component I chose to fabricate. It consists of seven species of wood and five different metals. The structure of the door is echoed in its form, and the project as a whole experiments with methods of finishing, texturing, and joining. Pulling the carved handle, which is attached to the door by a cable, opens the door while causing the slats to move slightly relative to one another. All components were fabricated by hand and work together to simultaneously express fluidity and solidity, positive and negative space, and unique material use and form.



This spread shows additional visual and material research I have been conducting as a continuation of my thesis work. Each project looks at atypical construction, and/or focuses on material understanding and unique use of, and finishes on, said materials.

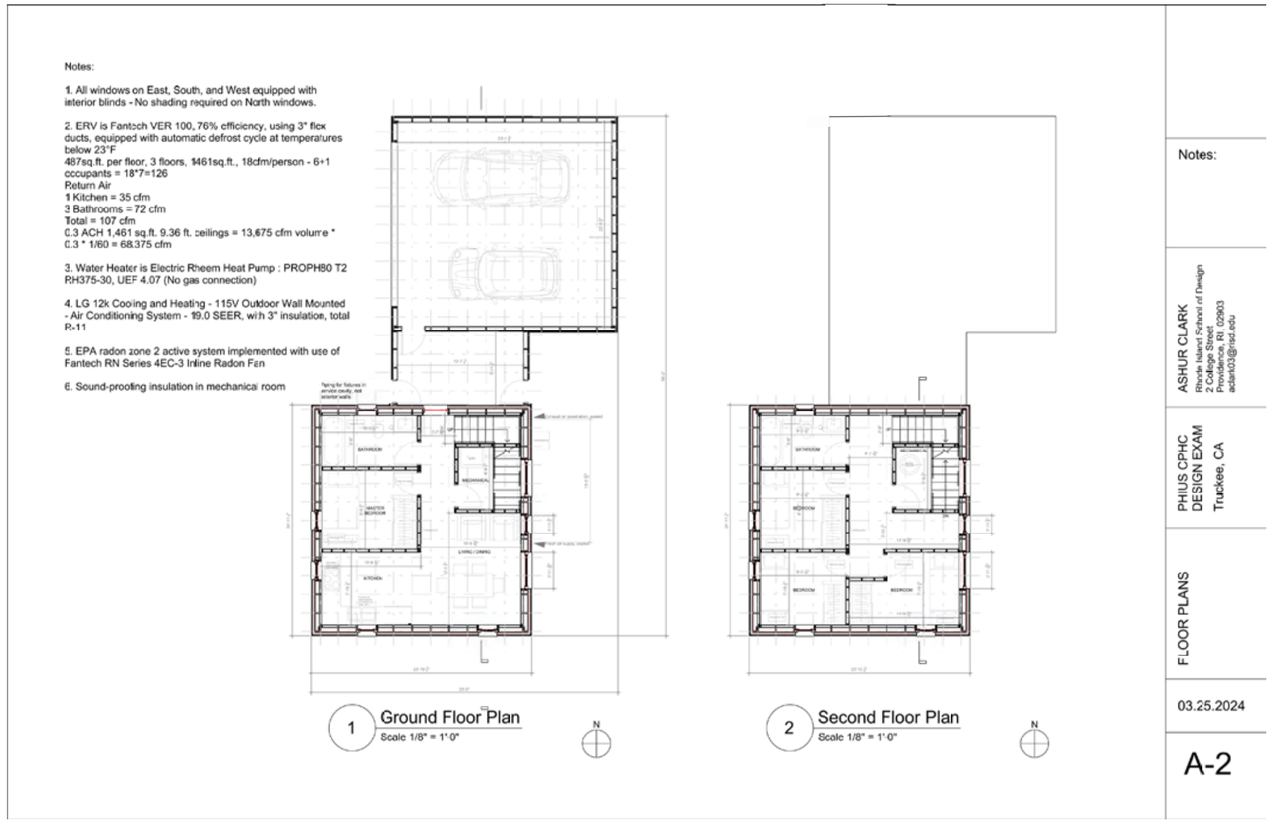


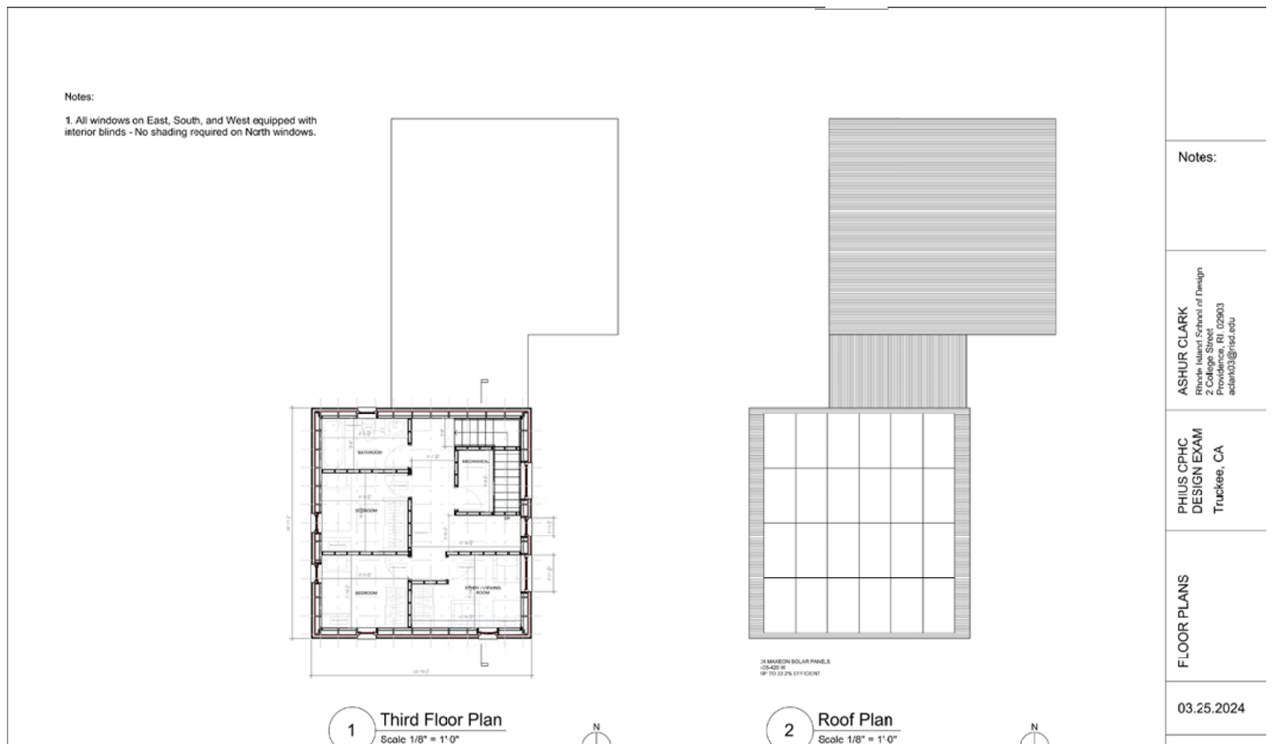
06: PHIUS CPHC EXAM

For my PHIUS Certified Passive House Consultant (CPHC) exam, I was given a site, Truckee, California, and a small set of parameters for a three-story home. The goal for this design was to meet the PHIUS criteria for a passive building, indicating a highly energy-efficient structure.

My response was to implement advanced light wood framing with members 24″ on center, meaning less material and cost. This framing system is modular and bears on a service cavity to allow for more continuous insulation on the exterior wall to improve thermal performance and protect mechanical systems from outdoor exposure.

One of the passive design strategies implemented involved the glazing, where large picture windows were placed on the eastern and southern facades to frame views and allow for solar heat gain. Another strategy was to expose the concrete floor on the ground level, so that it acts as a thermal mass to gather and release heat during the large diurnal temperature swings experienced in Truckee. The overall building layout allows the living space to experience the most solar heeat gain, leaving the unconditioned spaces to the north. No fixed exterior shading devices are present, rather only interior blinds, as Truckee benefits from heating during most of the year.





Notes:

1. No vapor control layer is needed in climate zone 4B
2. Envelope is air tight to 0.060 cfm50/sf
3. Design is thermal bridge free with <0.006 BTU/hr.ft.F

ROOF R-VALUE CALCULATION

AT CAVITY:
4" POLYISOCYANURATE AT R-6.5/IN. = R-26
3/4" PLYWOOD AT R-1.25/IN. = R-0.9375
14" MINERAL WOOL AT R-3.7/IN. = R-51.8
5/8" GYPSUM AT R-0.9/IN. = R-0.5625

TOTAL: R-79.3

AT JOIST WEB:
4" POLYISOCYANURATE AT R-6.5/IN. = R-26
3/4" PLYWOOD AT R-1.25/IN. = R-0.9375
7/8" PLYWOOD AT R-1.25/IN. = R-1.09375
14-1/4" OSB AT R-1.11/IN. = R-15.8175
7/8" PLYWOOD AT R-1.25/IN. = R-1.09375
5/8" GYPSUM AT R-0.9/IN. = R-0.5625

TOTAL: R-45.505

AT JOIST FLANGE:
4" POLYISOCYANURATE AT R-6.5/IN. = R-26
3/4" PLYWOOD AT R-1.25/IN. = R-0.9375
1-3/8" PLYWOOD AT R-1.25/IN. = R-1.71875
13-1/4" AIR AT R-3.0/IN. = R-39.75
1-3/8" PLYWOOD AT R-1.25/IN. = R-1.71875
5/8" GYPSUM AT R-0.9/IN. = R-0.5625

TOTAL: R-70.6875

ROOF COMPONENT R-VALUES:
AT CAVITY: R-79.3
AT JOIST WEB: R-45.505
AT JOIST FLANGE: R-70.6875

RATIO CAVITY TO WEB TO FLANGE:
20.5 : 0.4375 : 3.0625
CAVITY FRAMING FACTOR: 20.5/24 = 0.8541666
WEB FRAMING FACTOR: 0.4375/24 = 0.01822917
FLANGE FRAMING FACTOR: 3.0625/24 = 0.12760417

CAVITY: 79.3*0.8541666 = 67.7354114
WEB: 45.505*0.01822917 = 0.82951838
FLANGE: 70.6875*0.12760417 = 9.02001977

TOTAL ROOF R-VALUE = 77.5649495
CLIMATE MINIMUM ROOF R-VALUE: 77.0

WALL R-VALUE CALCULATION

AT CAVITY:
3" POLYISOCYANURATE AT R-6.5/IN. = R-19.5
3/4" PLYWOOD AT R-1.25/IN. = R-0.9375
5-1/2" BLOWN-IN CELLULOSE AT R-3.5/IN. = R-19.25
7/16" OSB AT R-1/IN. = R-0.4375
2.5" AIR AT R-3/IN. = R-7.5
5/8" GYPSUM: R-0.9/IN. = R-0.5625

TOTAL: R-48.1875

AT STUD:
3" POLYISOCYANURATE AT R-6.5/IN. = R-19.5
3/4" PLYWOOD AT R-1.25/IN. = R-0.9375
5-1/2" DOUGLAS FIR AT R-1.11/IN. = R-6.105
7/16" OSB AT R-1/IN. = R-0.4375
2.5" DOUGLAS FIR AT R-1.11/IN. = R-2.775
5/8" GYPSUM: R-0.9/IN. = R-0.5625

TOTAL: R-30.3175

WALL COMPONENT R-VALUES
AT CAVITY: R-48.1875
AT STUD: R-30.3175
RATIO CAVITY TO STUD: 22.5 : 1.5
CAVITY FRAMING FACTOR: 22.5/24 = 0.9375
STUD FRAMING FACTOR: 1.5/24 = 0.0625

CAVITY: 48.1875*0.9375 = 45.1757812
STUD: 30.3175*0.0625 = 1.89484375

TOTAL WALL R-VALUE = 47.070625
CLIMATE MINIMUM WALL R-VALUE: 46

WINDOW SPECIFICATIONS

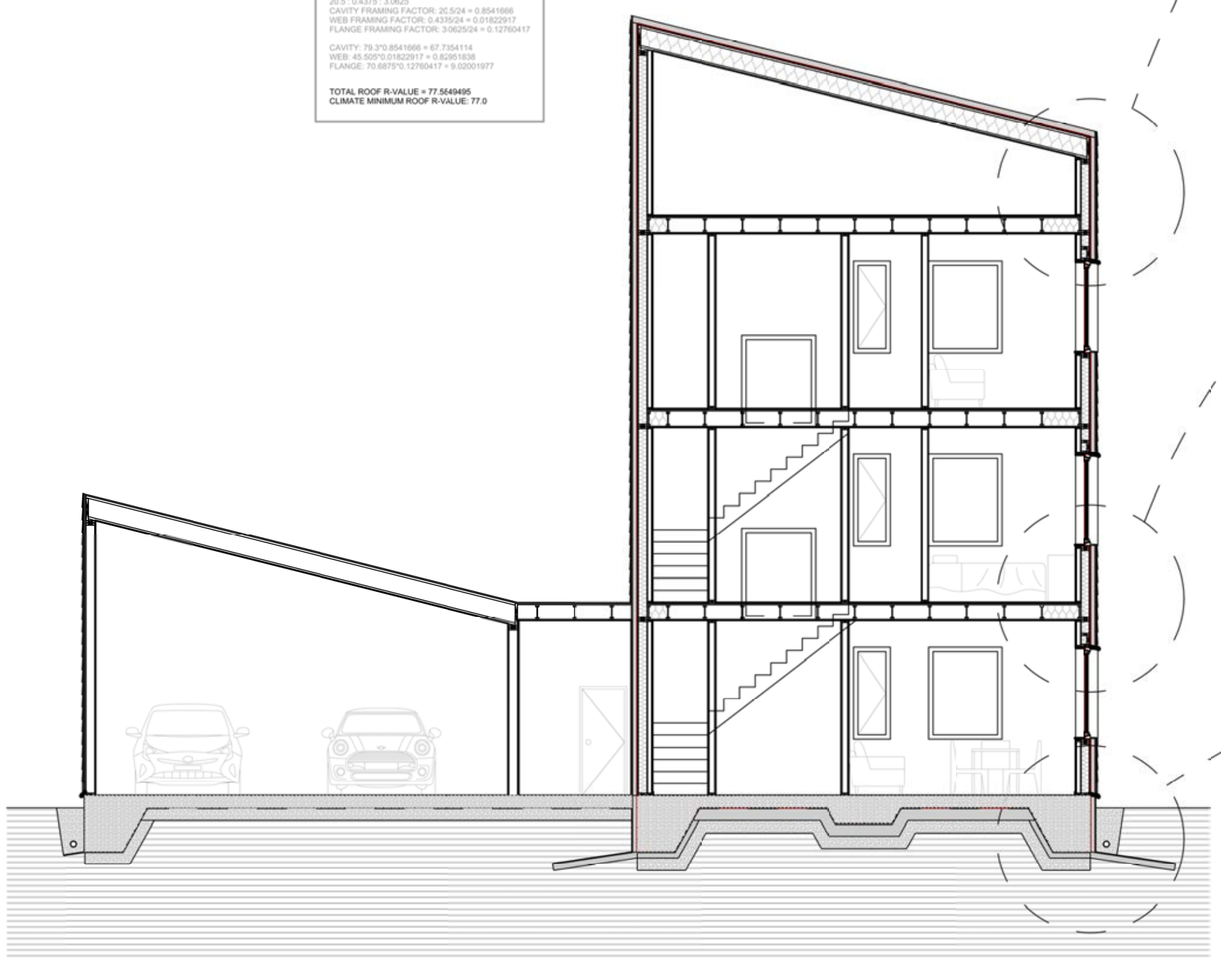
CLIMATE ZONE 4B MAXIMUM WINDOW U-VALUE: 0.16
CLIMATE ZONE 4B MAXIMUM SHGC: 0.4

1. OPERABLE WINDOW - 23.62" x 59.06" (WxH)
ALPINE ZENITH CASEMENT
FIBERGLASS, TRIPLE GLAZED
ARGON FILLED WINDOW ASSEMBLY
(BALANCED-6 TGT)

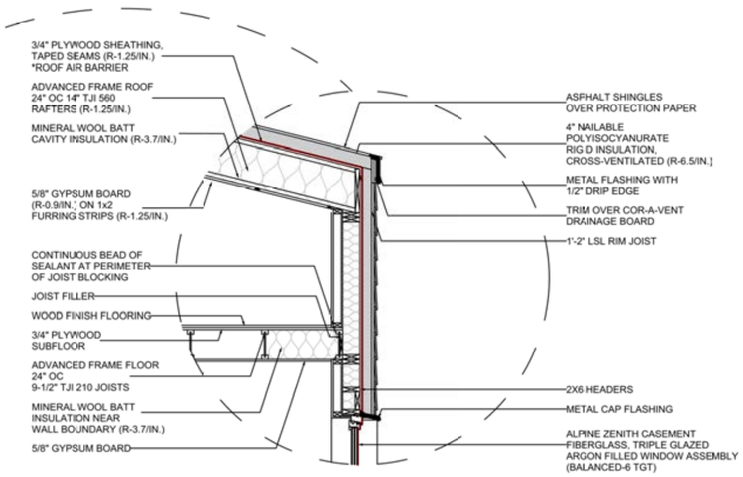
U-VALUE CENTER OF GLASS (CLIMATE ZONE 4B): 0.11
U-VALUE WHOLE WINDOW: 0.16
U-VALUE WINDOW FRAME: 0.18
SHGC CENTER OF GLASS: 0.39
SHGC WHOLE WINDOW: 0.26

2. PICTURE WINDOW - 47.24" x 59.06" (WxH)
ALPINE ZENITH FIXED HIGH PROFILE
FIBERGLASS, TRIPLE GLAZED
ARGON FILLED WINDOW ASSEMBLY
(BALANCED-6 TGT)

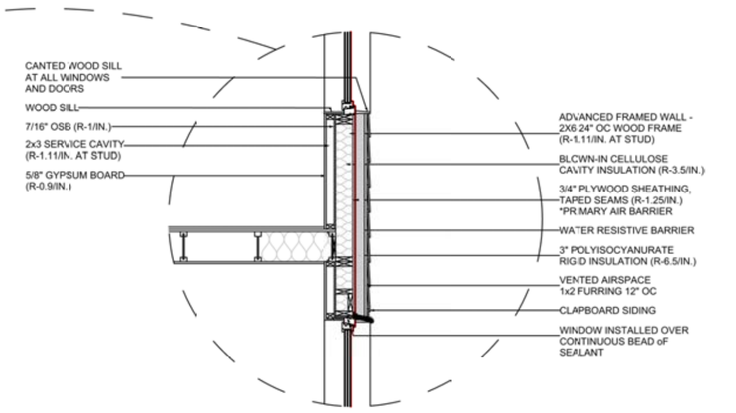
U-VALUE CENTER OF GLASS (CLIMATE ZONE 4B): 0.11
U-VALUE WHOLE WINDOW (CLIMATE ZONE 4B): 0.14
U-VALUE WINDOW FRAME: 0.15
SHGC CENTER OF GLASS: 0.39
SHGC WHOLE WINDOW: 0.31



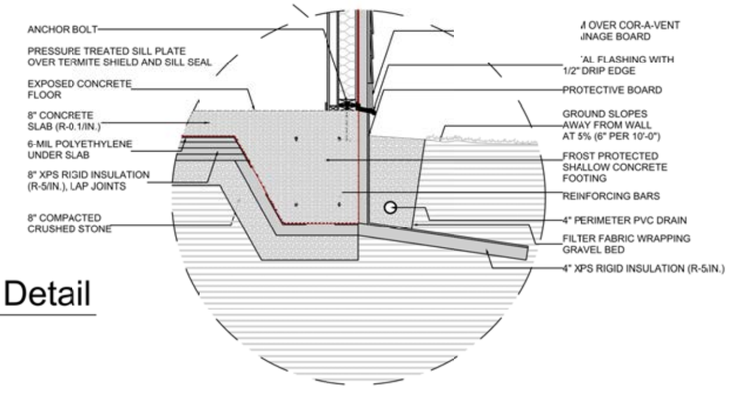
1 Building Section
Scale 1/8" = 1'-0"



2 Roof Detail
Scale 1/4" = 1'-0"



3 Wall Detail
Scale 1/4" = 1'-0"



4 Foundation Detail
Scale 1/4" = 1'-0"

Notes:

ASHUR CLARK
Rhode Island School of Design
2 College Street
Providence, RI, 02903
aclark03@risd.edu

PHIUS CPHC DESIGN EXAM
Truckee, CA

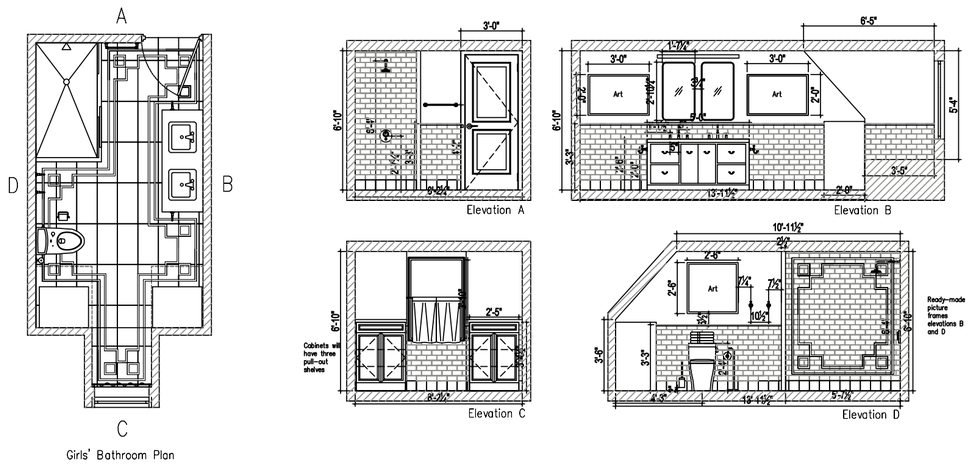
BUILDING SECTION AND DETAILS

03.25.2024

A-4

07: PROFESSIONAL WORK

Below are residential plans and elevations I generated during my internship with Jarret Yoshida Inc., some of which include my own design proposals which were accepted by clients.

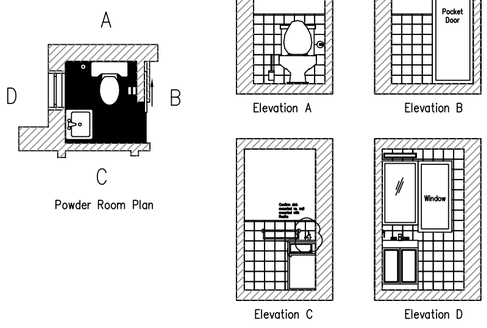


JARRET YOSHIDA, INC.
51 MACDONOUGH STREET
BROOKLYN, NEW YORK
TEL: 718-636-5321

REMARKS

DRAWN BY: ASHUR CLARK
DATE DRAWN: 07/25/2023
BATHROOM ELEVATION
4TH/5TH BATHROOMS
DIMENSIONS

02

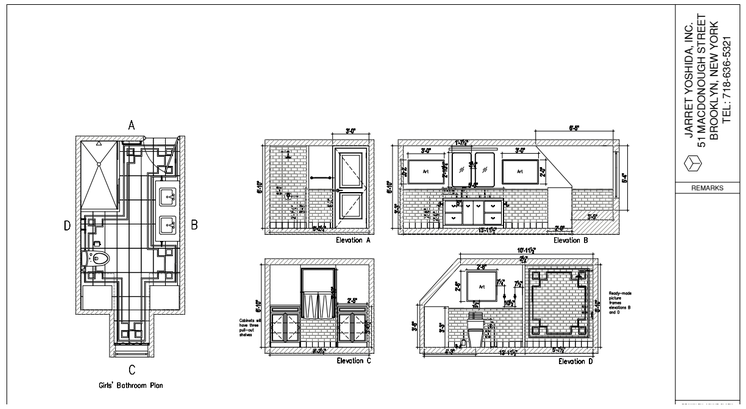


JARRET YOSHIDA, INC.
51 MACDONOUGH STREET
BROOKLYN, NEW YORK
TEL: 718-636-5321

REMARKS

DRAWN BY: ASHUR CLARK
DATE DRAWN: 07/25/2023
BATHROOM ELEVATION
POWDER ROOM

02



JARRET YOSHIDA, INC.
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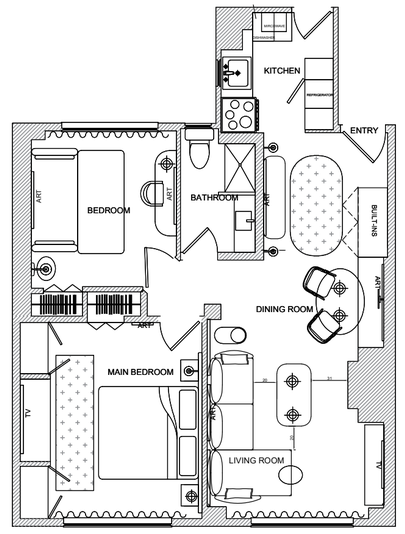
BROOKLYN, NEW YORK
TEL: 718-636-5321

REMARKS

DRAWN BY: ASHUR CLARK
DATE DRAWN: 9/1/2023
FLOOR PLAN
AND ELEVATIONS

A-01



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TEL: 718-636-5321

REMARKS

DRAWN BY: ASHUR CLARK
DATE DRAWN: 08/03/2023
FLOOR PLAN

A-01

08: MISCELLANEOUS WORK

This section shows selected two dimensional (drawings, paintings, mixed media) and three dimensionsal (woodwork, metalwork, casting, other media) works of mine from personal projects and coursework. This work often inspires my architectural process through explorations of material, composition, texture, space, color, feeling, and other qualities.