



**SHELTER PROPOSAL FOR COLORADO VILLAGE
COLLABORATIVE 'S SAFE OUTDOOR SPACES**



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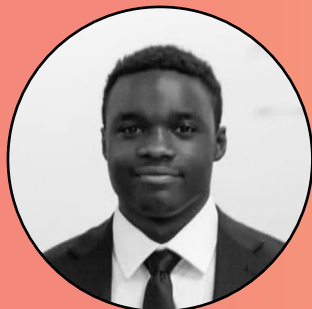
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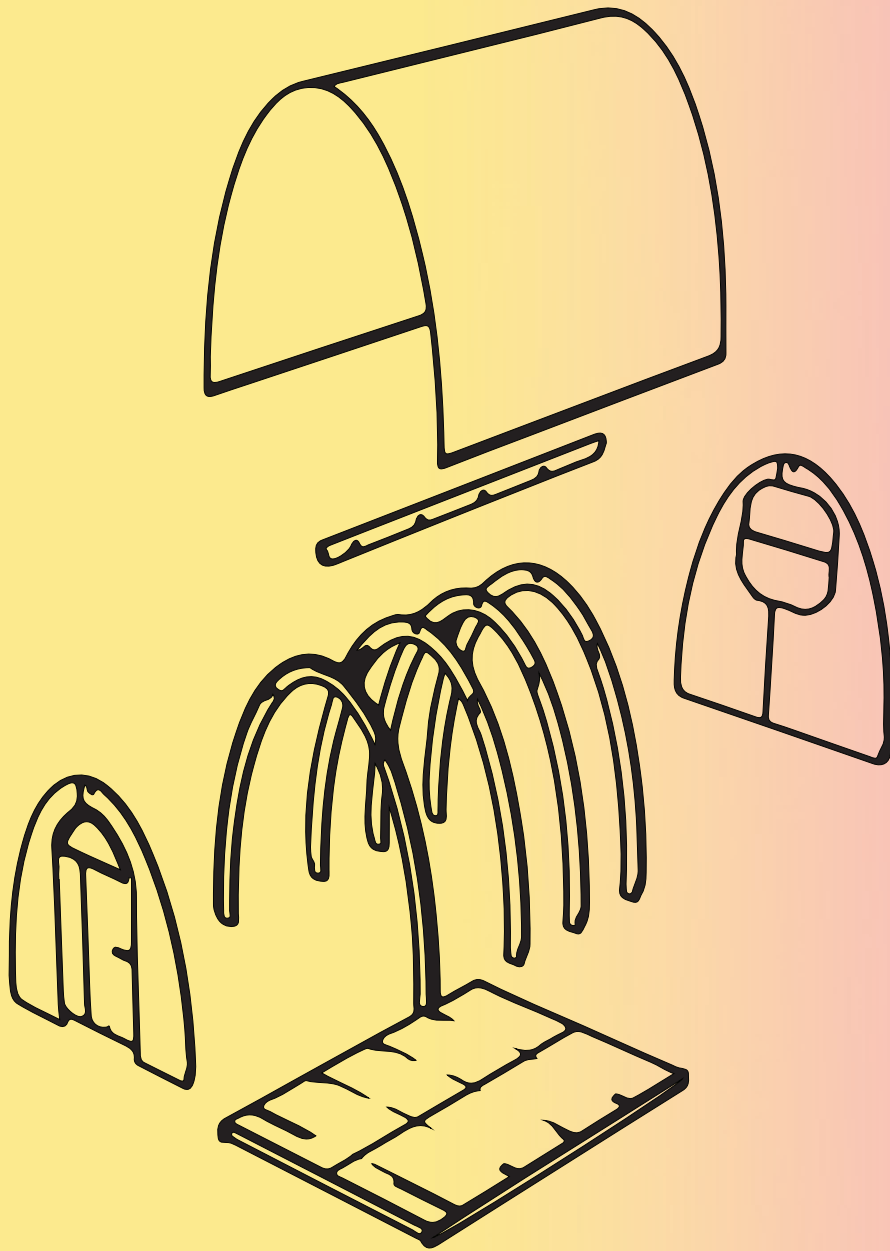
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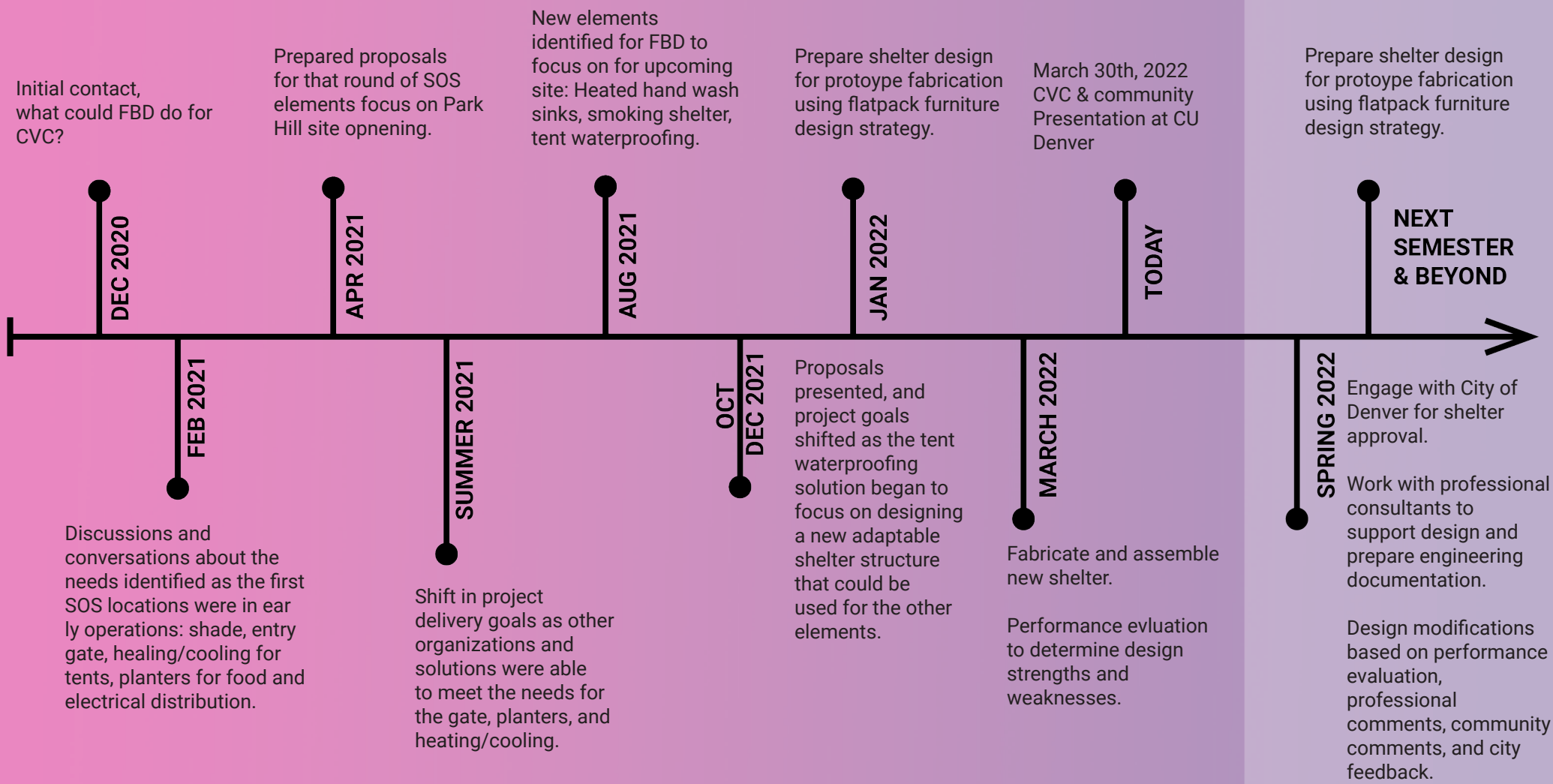
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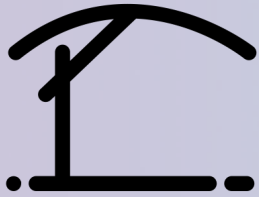
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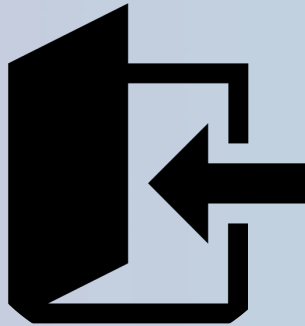
TIMELINE



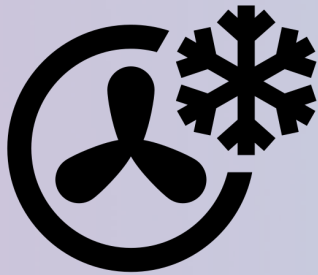
EXISTING ISSUES



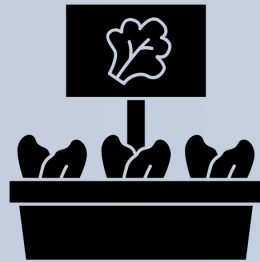
SHADE



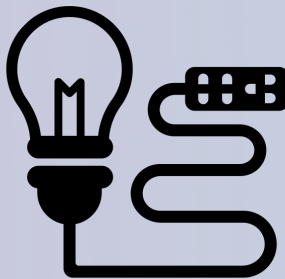
ENTRY



**HEATING/
COOLING**

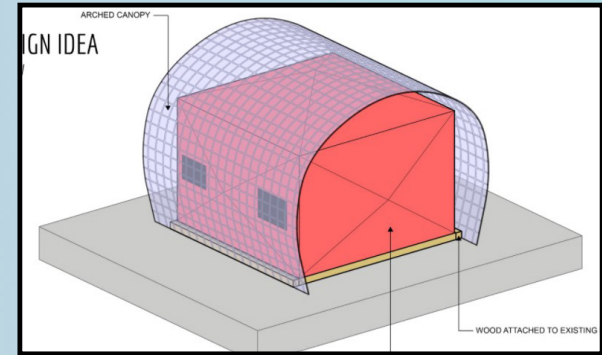


**PLANTERS
FOR FOOD**

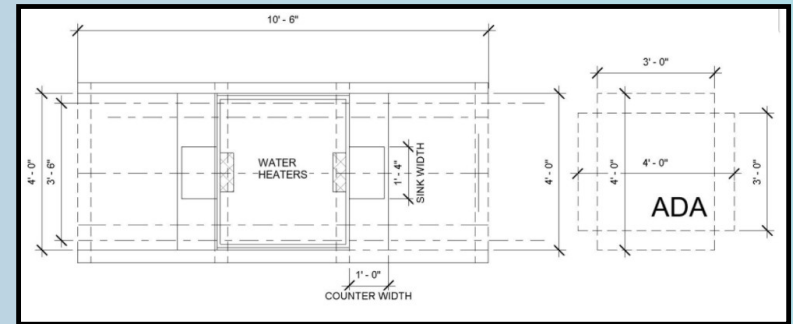


**ELECTRICITY
DISTRIBUTION**

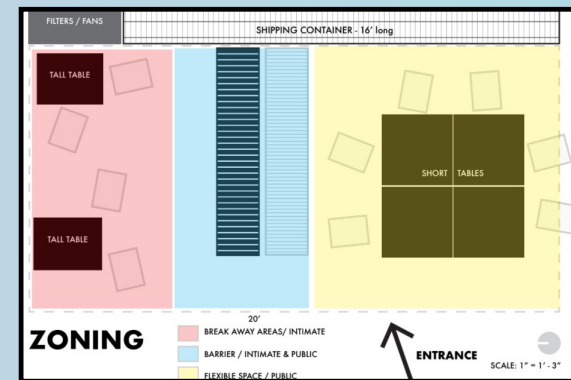
EVOLVING PROBLEMS



WATER PROOFING
The tent doesn't work



HANDSINKS
More than clean hands - a grooming station. Its about self love and reflection



VENTILATION
Smoking is about community. Community is what holds everything together.

EXISTING CONDITIONS



INDIVIDUAL TENTS

COMMUNAL TENTS

ADA TENTS

FACILITIES

RESOURCE TENTS

EMPLOYEE TRAILER

ENTRY

HANDSINKS
More than clean hands
- a grooming station.
Its about self love and
reflection

VENTILATION
Smoking is about community.
Community is what holds everything
together.



ROAD MAP FOR ITERATIVE DESIGN

1 - UNDERSTAND OUR OPTIONS

- > Studying and evaluating precedents and different models already in use
- > Emphasize our goals: **dignity, transportability, and cost**

2 - REFINE DESIGN

- > Extrapolate from research and refine design details
- > Generate list of possibilities within constraints
- > Engage students and community representatives

3 - FINESE LOGISTICS

- > Determine constructability and ease of replication
- > Determine manufacturing methods
- > Detail plan of execution
- > Build small scale prototype

4 - BUILD A PROTOTYPE

- > Test project management and planning
- > Test CNC file to be distributed to manufacture
- > Support design development

5 - SHARE WITH WORLD

- > Present to as many people as possible
- > Collect as much data from as many people as possible
- > Test in controlled field setting for evaluation and test in actual SOS application

6 - GO BACK TO STEP 1

- > This process depends on our willingness to evaluate and re - evaluate each step, plan ahead, and support idea development to succesfully execute good design.

SUMMARY OF RESEARCH

CONESTOGA HUT

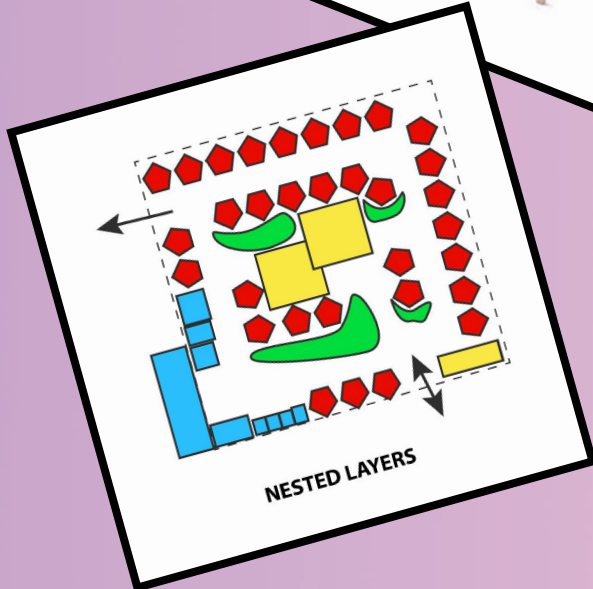
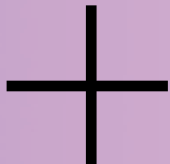
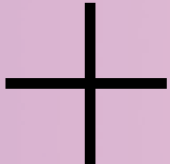
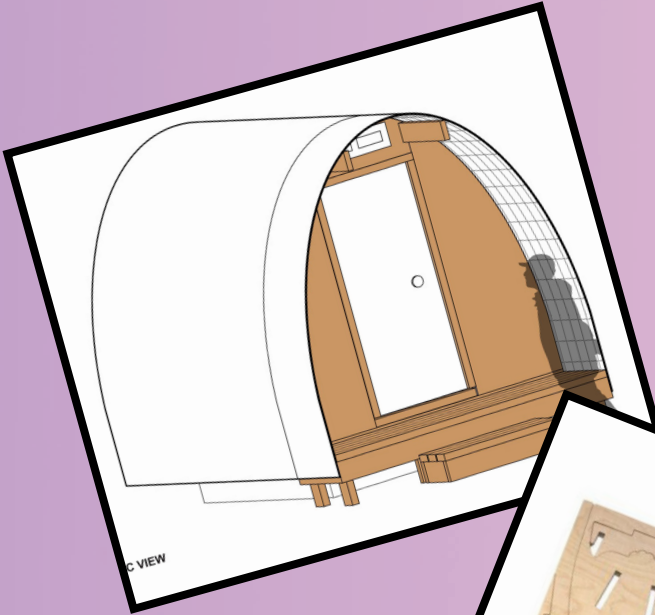
- Methodology
- Initial Material List
- Legal precedent
- Shape factor
- Rough Dimensions
- Launching Point

FLAT PACK DESIGN

- Constructability
- Ease of Build
- Furniture-Like Assembly
- Mass Manufacturing Potential
- Transportability
- Cost

TRAUMA INFORMED DESIGN

- Nuance of Privacy
- Nuance of Dignity
- Site Plan Design
- Flexible Comfort
- Privacy & Visibility
- The Essence of Feeling "Safe"



TRAUMA INFORMED DESIGN PRINCIPLES

Calming Isolation

A place to completely black out the world, where you can reconnect with yourself and preserve your boundaries.

Active Discharge

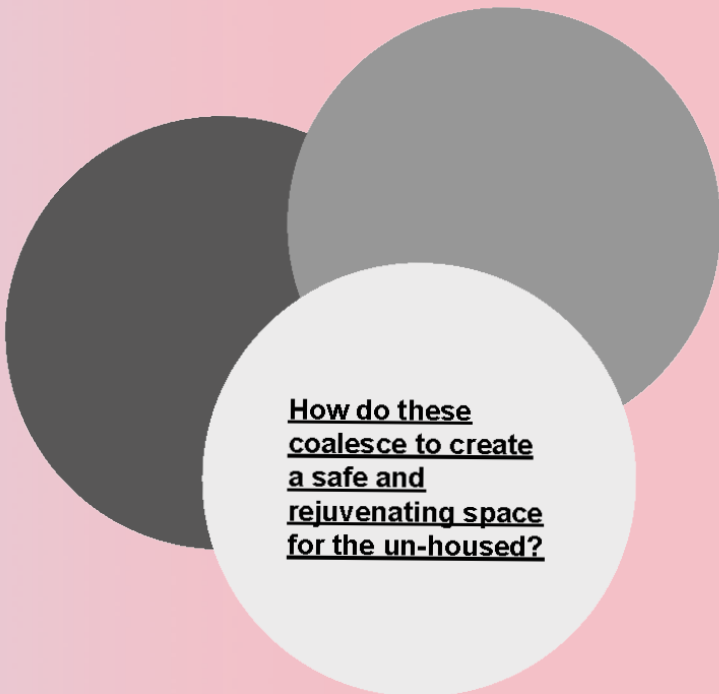
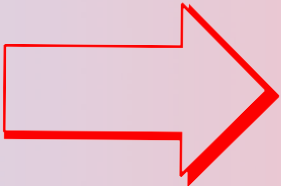
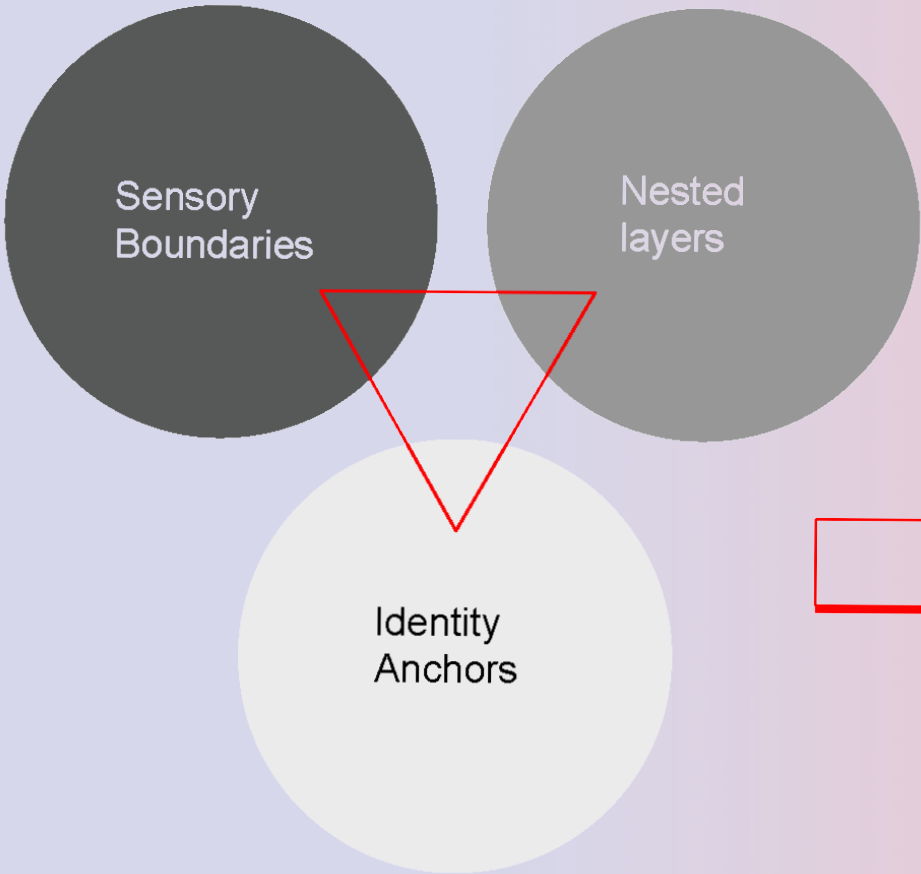
Getting a controlled dose of adrenaline in a mediated risk environment.

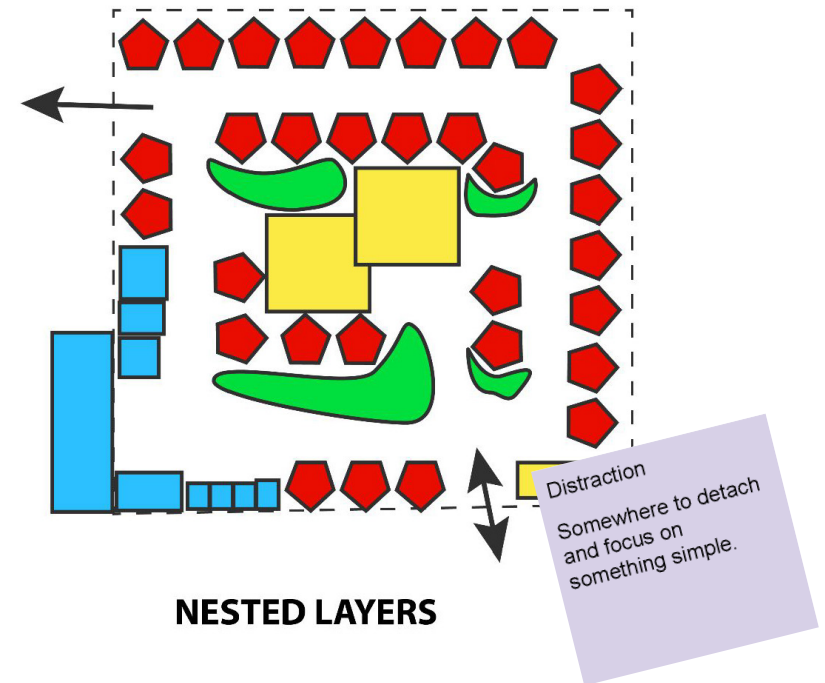
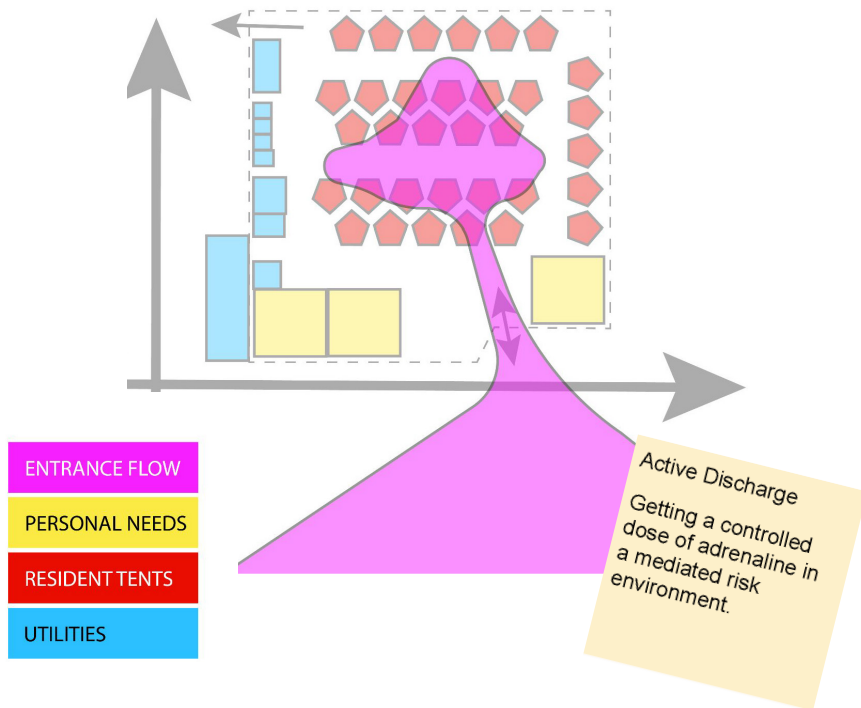
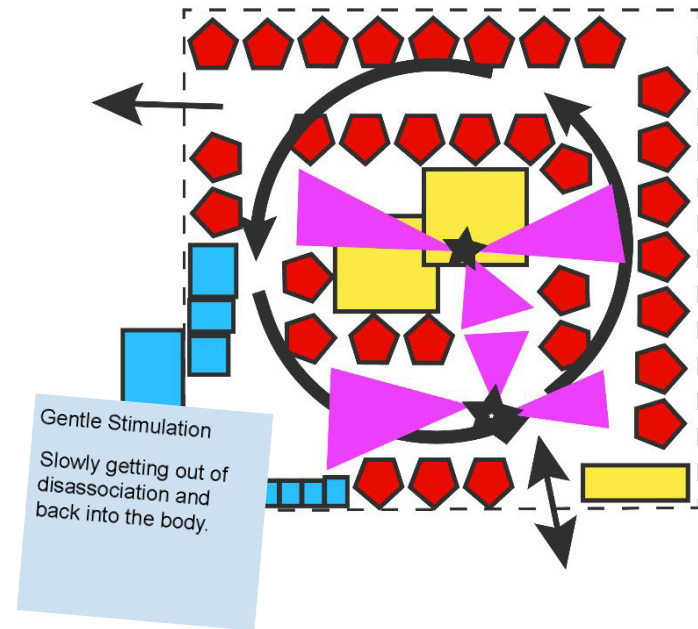
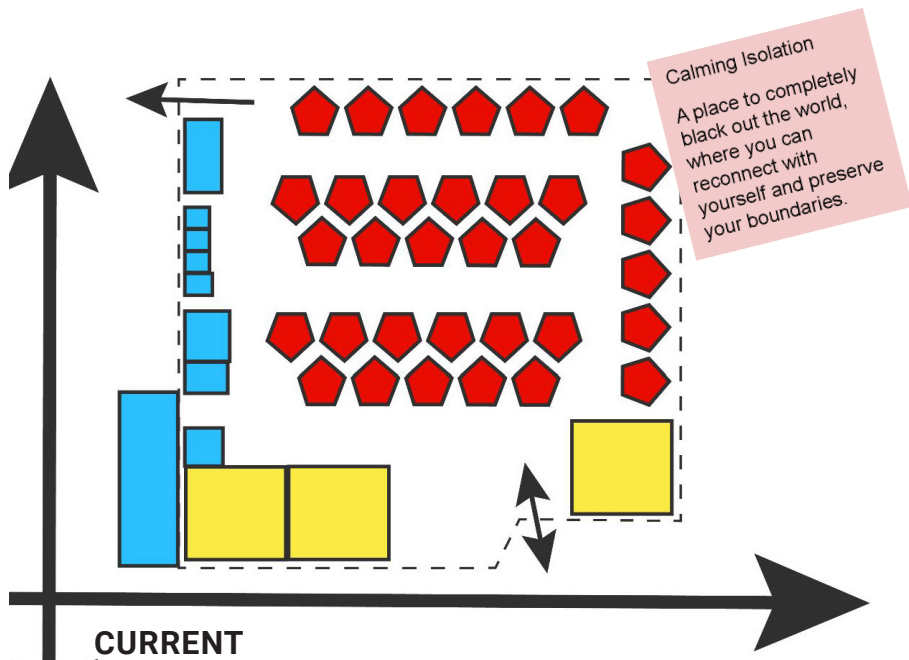
Gentle Stimulation

Slowly getting out of disassociation and back into the body.

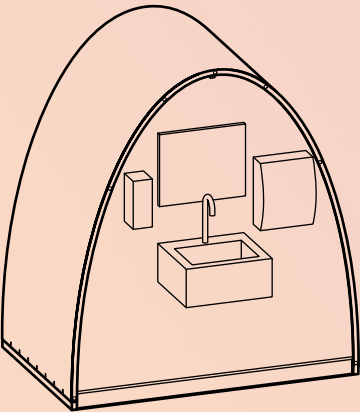
Distraction

Somewhere to detach and focus on something simple.



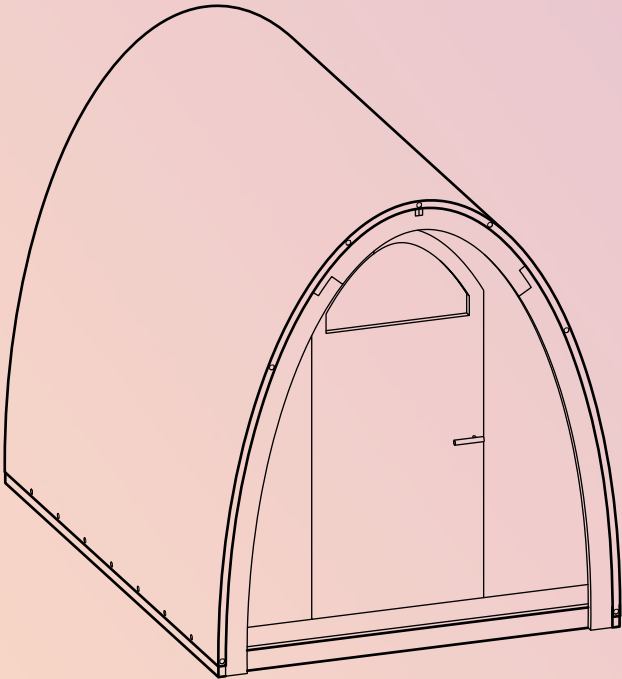


3 FUNCTIONS, 1 FORM



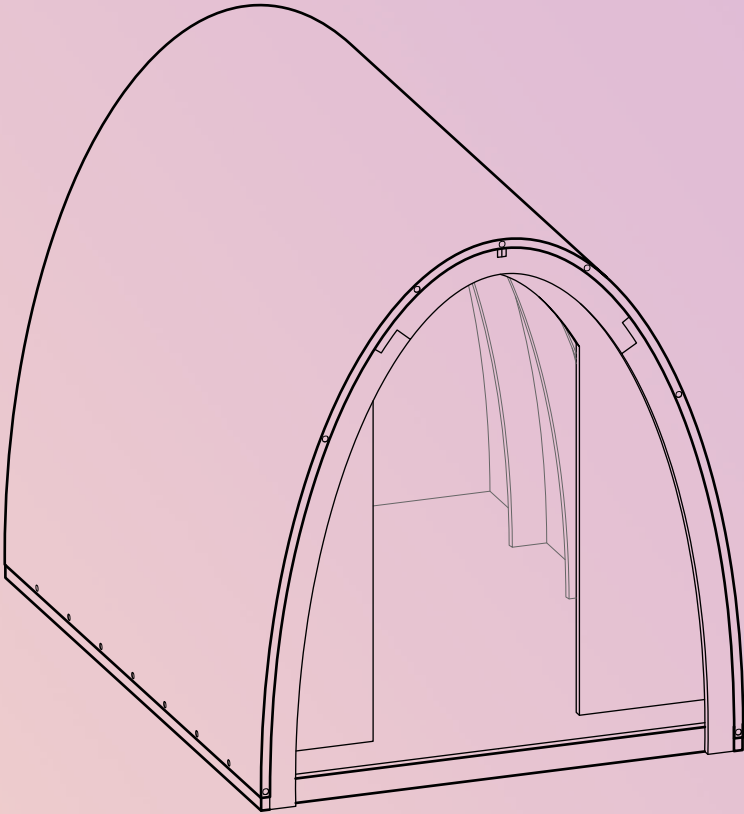
SMALL
DOUBLE HAND SINK

3'-6" L
5' W
5'-6" H



MEDIUM
DWELLING

10' L
7' W
7'-10" H



LARGE
SMOKING SHELTER

12' L
8'-4" W
9'-4" H



BRIEF DESCRIPTION:

We focused on three fundamental goals to design a safe single occupant shelter:

DIGNITY

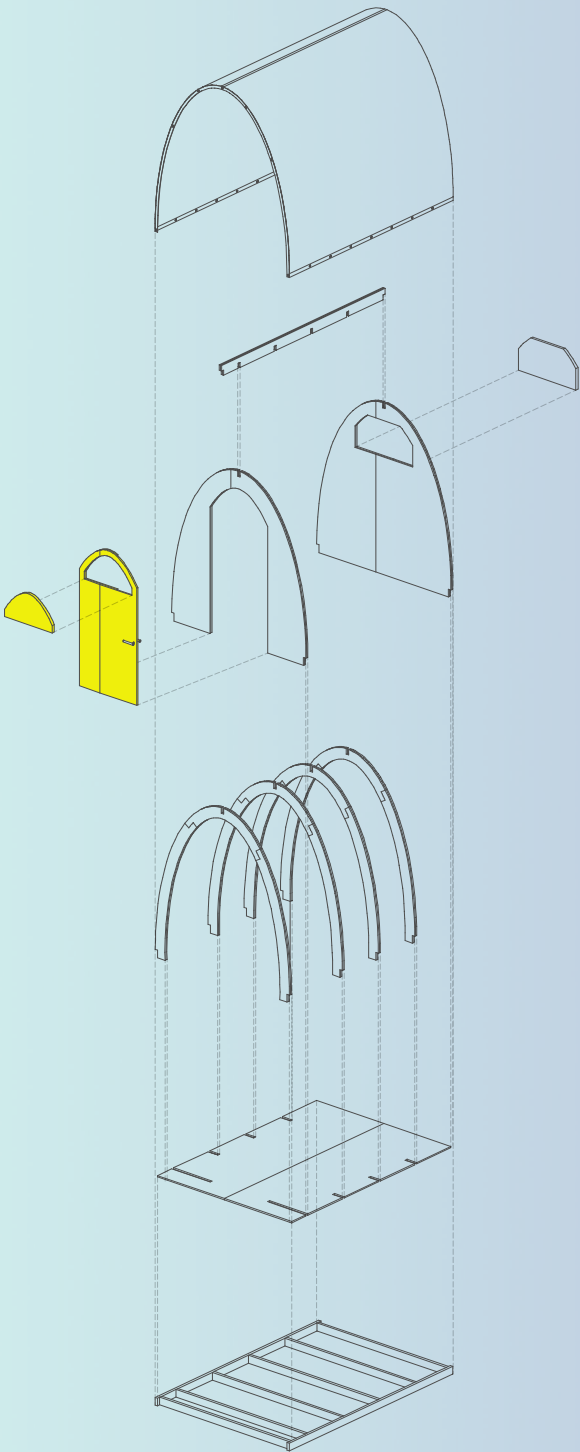
This shelter uses quality materials. The space is designed to serve many needs while the shape defines a unique and consistent design language for a community.

TRANSPORTABILITY

The shelter can be delivered, assembled, disassembled, relocated, and reassembled by a two person team of novice builders with a pick-up truck. It leaves no foot print behind when it is relocated.

COST

The tents currently in use last about a year, but this shelter is durable enough to last seven to ten years for half the price of the tent replacements over the same amount of time. The shell offers better protection from the elements compared to the current solution.



COMPONENTS

INSULATED CANVAS

the shelter covering consists of an air entrained insulation with radiant barrier sandwiched between 2 layers of canvas.

RIDGE BEAM

the ridge beam ties the whole structure together ensuring the end walls and ribs all stay in place and have sheer support.

END WALLS + OPENINGS

CNC machine routed 4x8 sheets of plywood then doubled up to make solid walls, window shutters, and a door.

RIBS

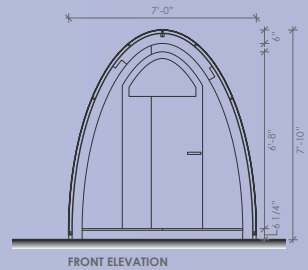
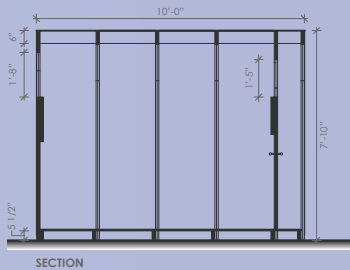
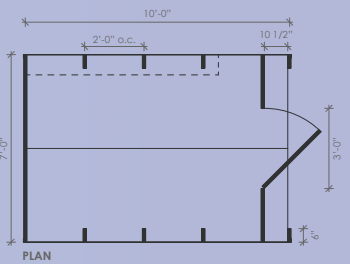
CNC machine routed 4x8 sheets of plywood are doubled up to make the legs in three segments: two legs that slip into notches cut in the floor, and the arch that connects the legs.

FLOOR FINISH

CNC machine routed 4x10 sheets of plywood that perfectly fit the ribs.

FLOOR BASE

a series of treated 2x6 lumber joists that buffer the shelter from the ground.



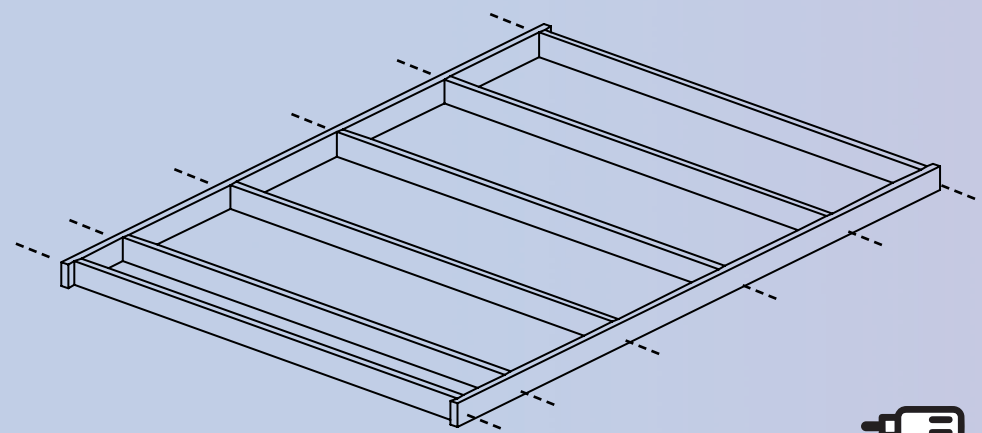
MATERIAL LIST

2 qty	4 x 10 Plywood Sheets
12 qty	4 x 8 Plywood Sheets
6 qty	2 x6 Treated Lumner
1 qty	Custom made water resistant and insulated fabric by Denver Tent
36qty	Canvas hooks

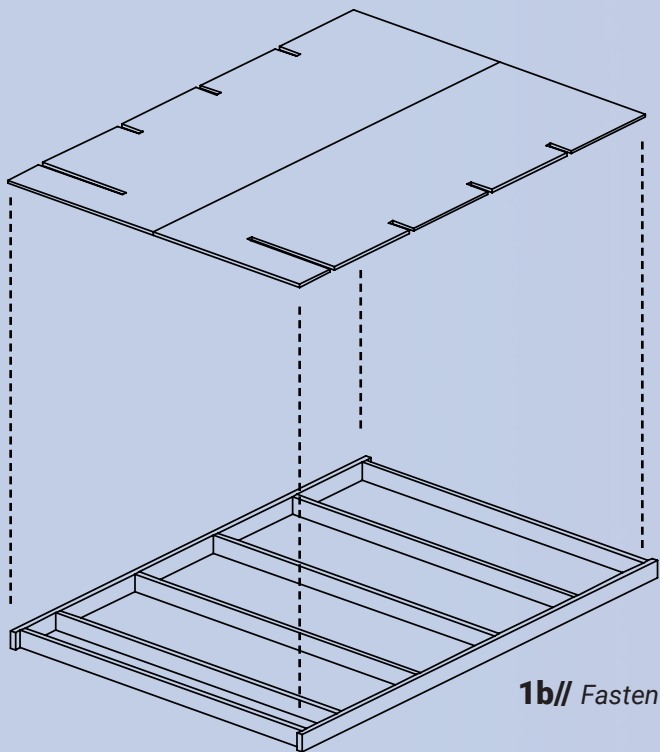
1 // BASE

MATERIALS:

- 8 qty 2x6 ground contact treated joists
- 2 qty CNC machine routed 4x10 plywood sheets



1a// Gather all 2x6 (8) and assemble as shown

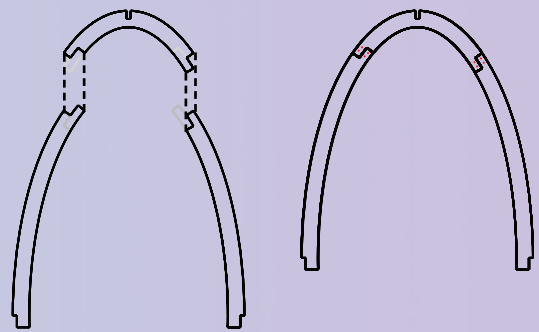


1b// Fasten precut plywood to frame

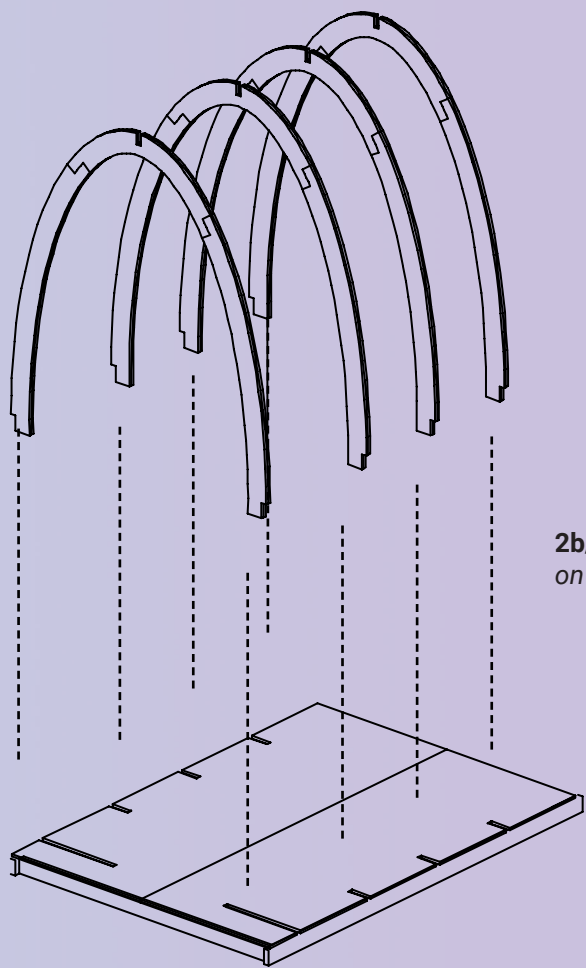
2// RIBS

MATERIALS:

- 4 qty pre - glued rib legs
- 4 qty pre - glued arch beam



2a// Fasten these three components until you have a total of 4x Ribs

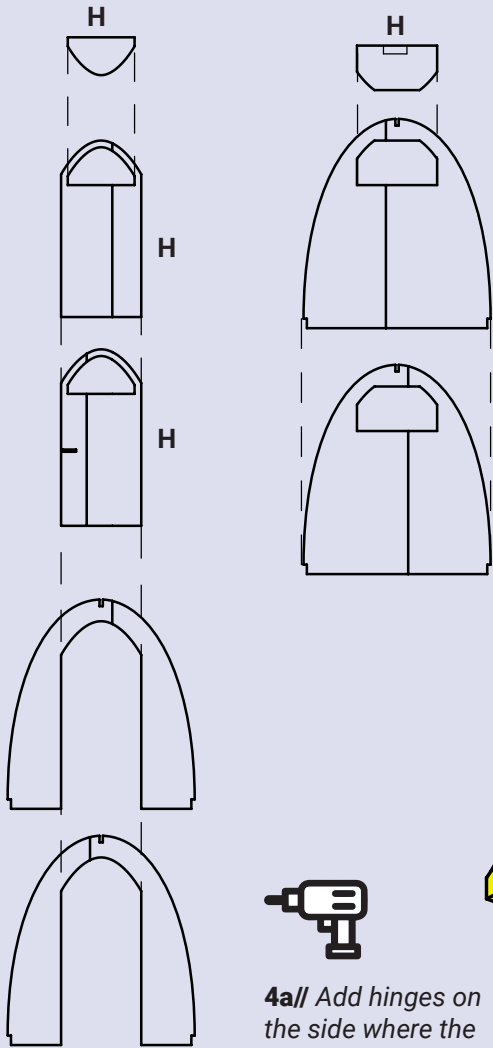


2b// Slide each rib into the slots on the base

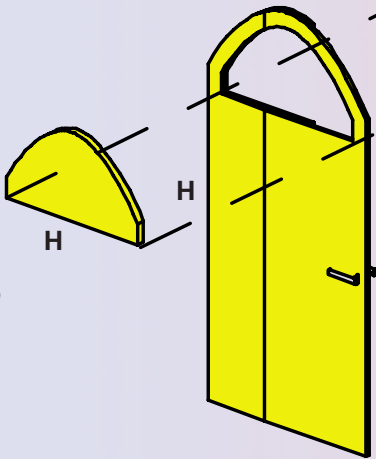
3 // END WALLS

MATERIALS:

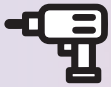
- 2 qty pre - glued wall panels
- 2 qty windows cur our of wall material
- 1 qty accessible and personalized door



4a// Add hinges on the side where the letter H is marked. Add hardware if applicable.



3a// If not pre assembled. Glue walls and doors as shown.



3b// Assemble and fasten to base as shown.

5 // RIDGE BEAM

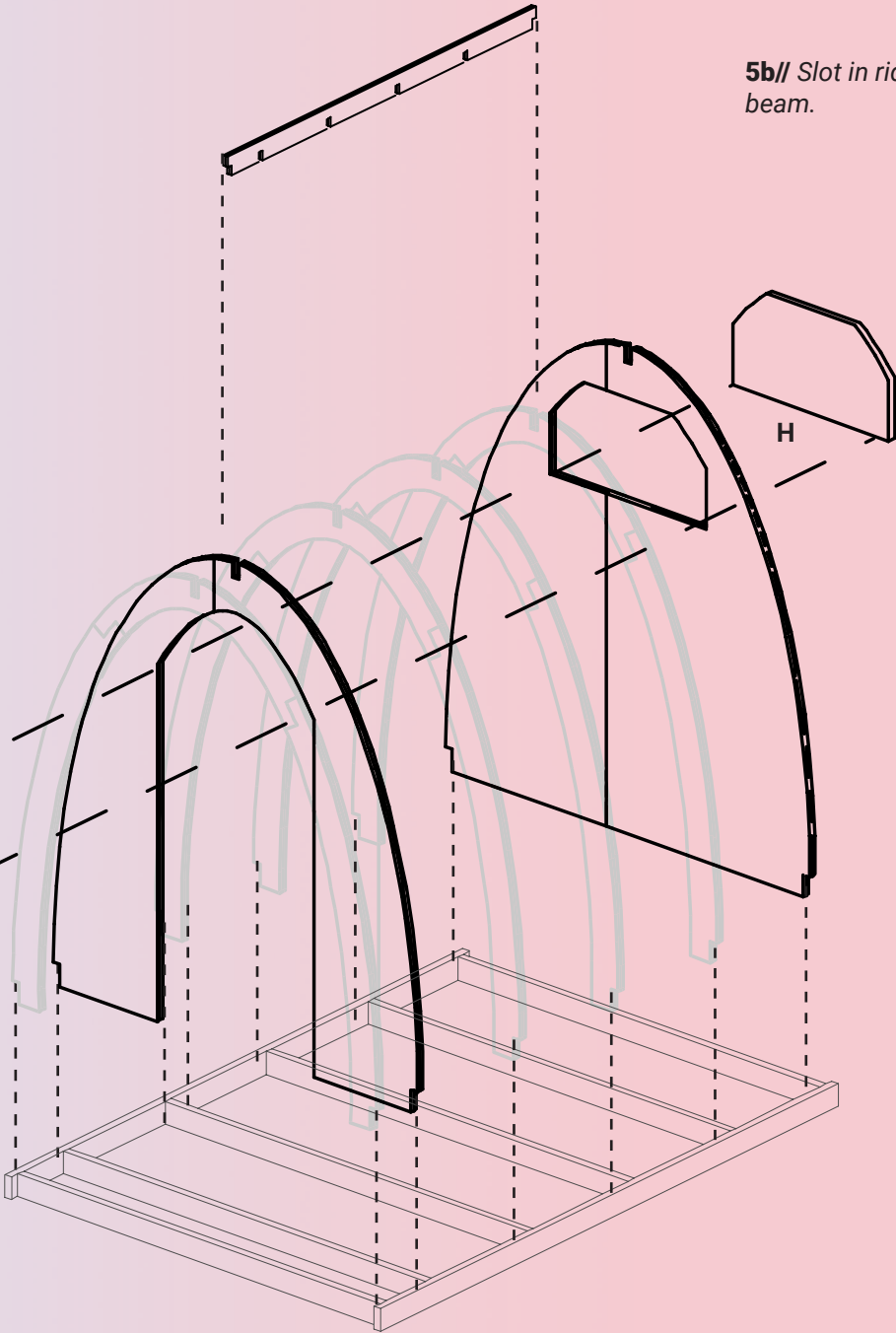
MATERIALS:

- 1 qty pre notched ridge beam



5a// If not pre assembled. Glue two ridge beams together to make it stronger.

5b// Slot in ridge beam.

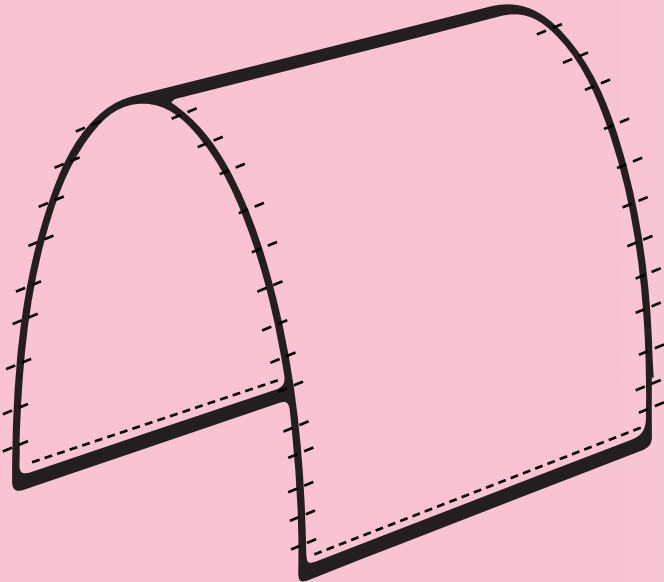


4 // DOORS & WINDOWS

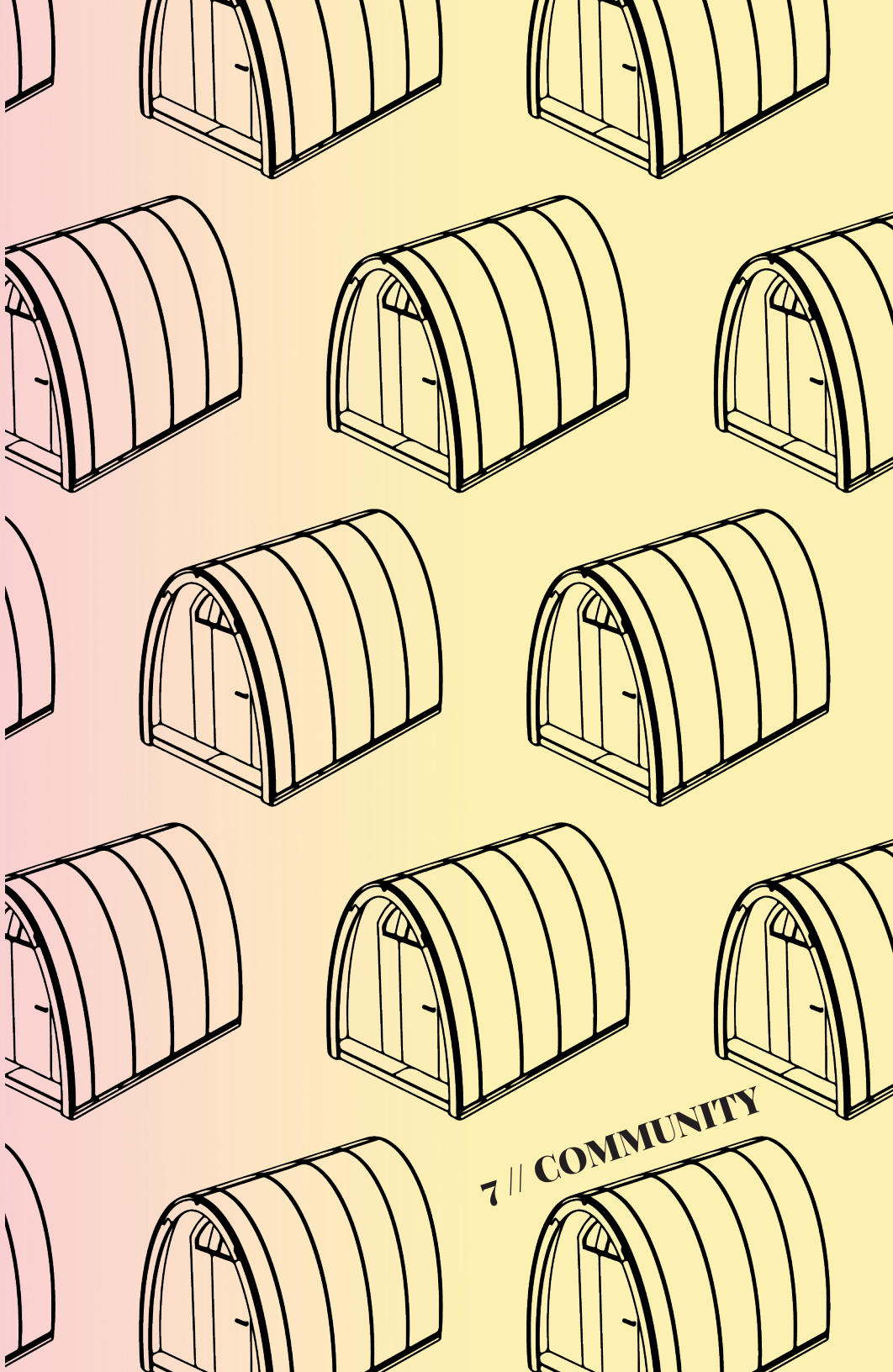
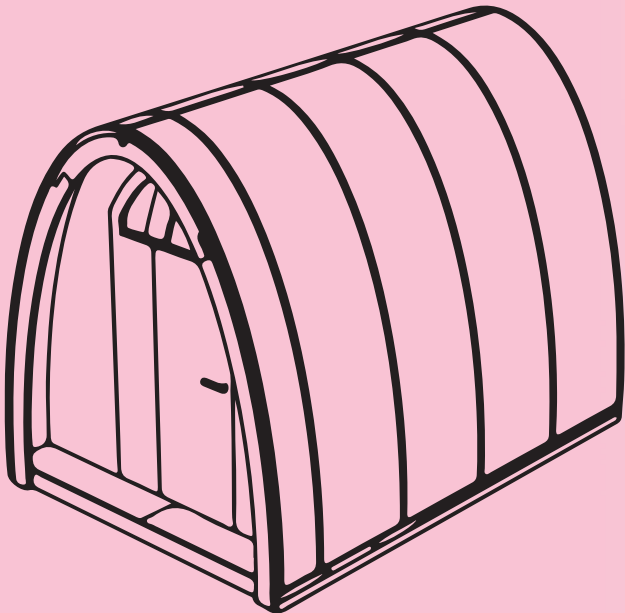
6 // TENT

MATERIALS:

- 1 qty insulated canvas fabricated by Denver Tent
- 36 qty canvas hooks



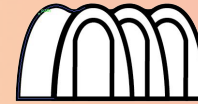
6a// Tightly hook tent on all sides for a tight enclosure.



7 // COMMUNITY



**AIAS CU DENVER
FREEDOM BY DESIGN**



FEEDBACK

**Any ideas, comments or suggestions?
Please leave your feedback by
scanning the QR Code below:**



**For more information please visit
aiasdenver.org/freedom-by-design**

SPECIAL THANKS

**Colorado Village Collaborative
BUILD by Radian
AIA Colorado
Denver Tent
University of Colorado Denver Campus
College of Architecture and Planning
faculty & staff
CAP Fabrication Lab
Ethan Solomon from Solodome
Production (photo & video)**

**All volunteers that have offered their
professional services and manual labor.**

THANK YOU!

