DESIGN CHARETTES SWITZERLAND

GION CAMINADA Swiss Architect - Specializes in vernacular, small scale and timber design.

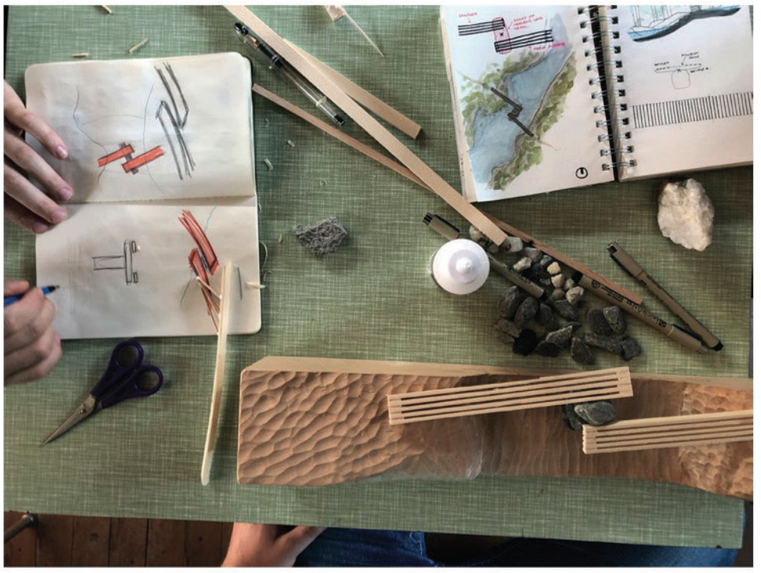
JURG CONZETT Swiss Engineer - Specializes in multi-scale bridge design. Designer of the 7 Bridges in Flims.

SWISS ENGINEER MEETINGS GION CAMINADA + JURG CONZETT

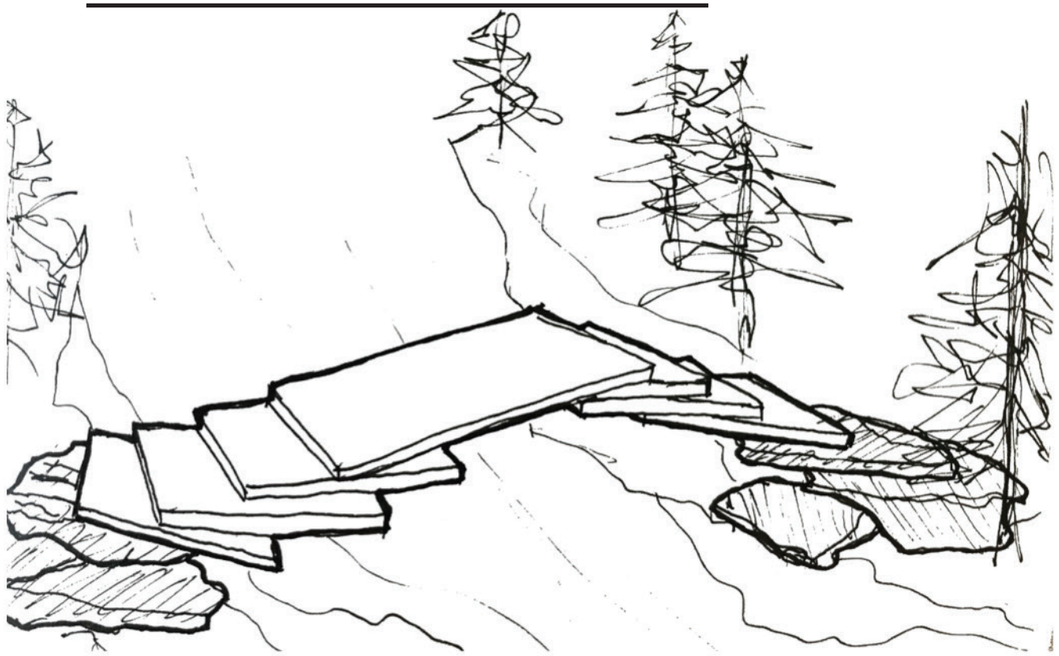


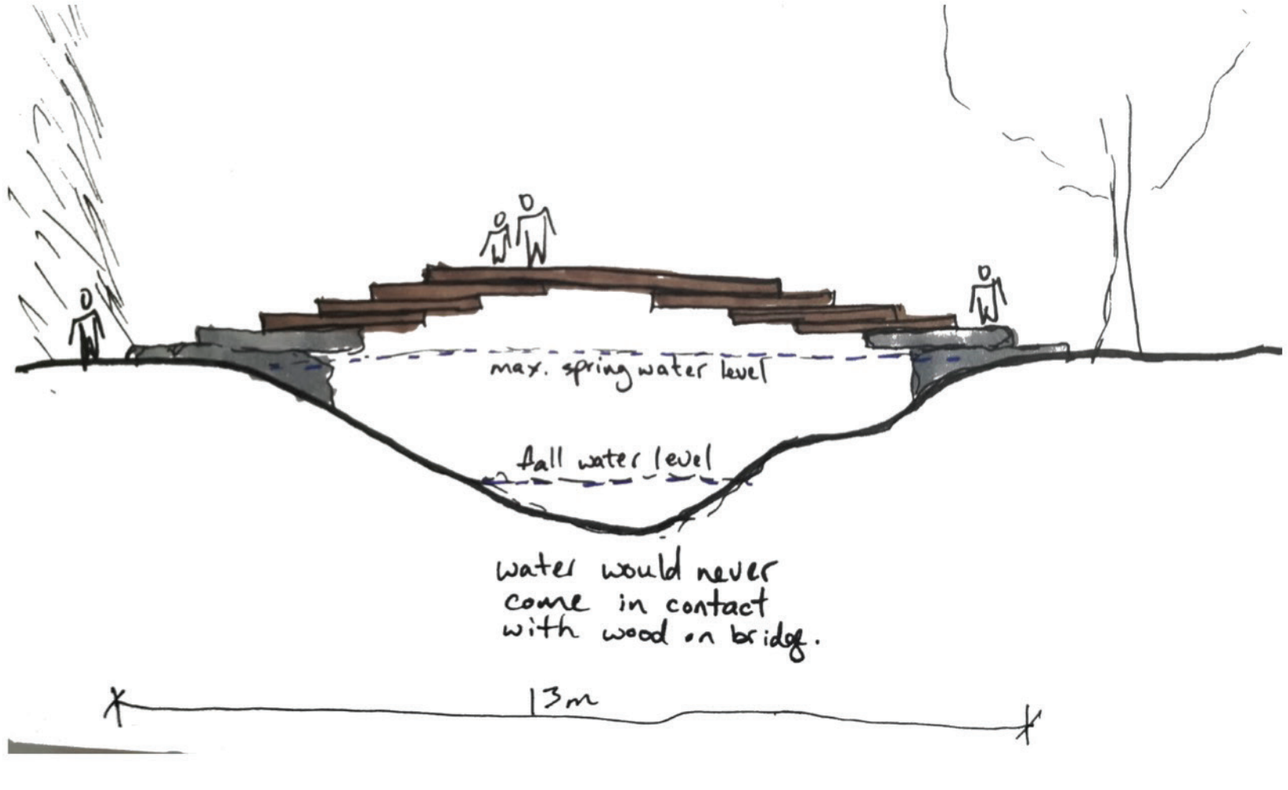


MICRONIS



FIRST ITERATIONS

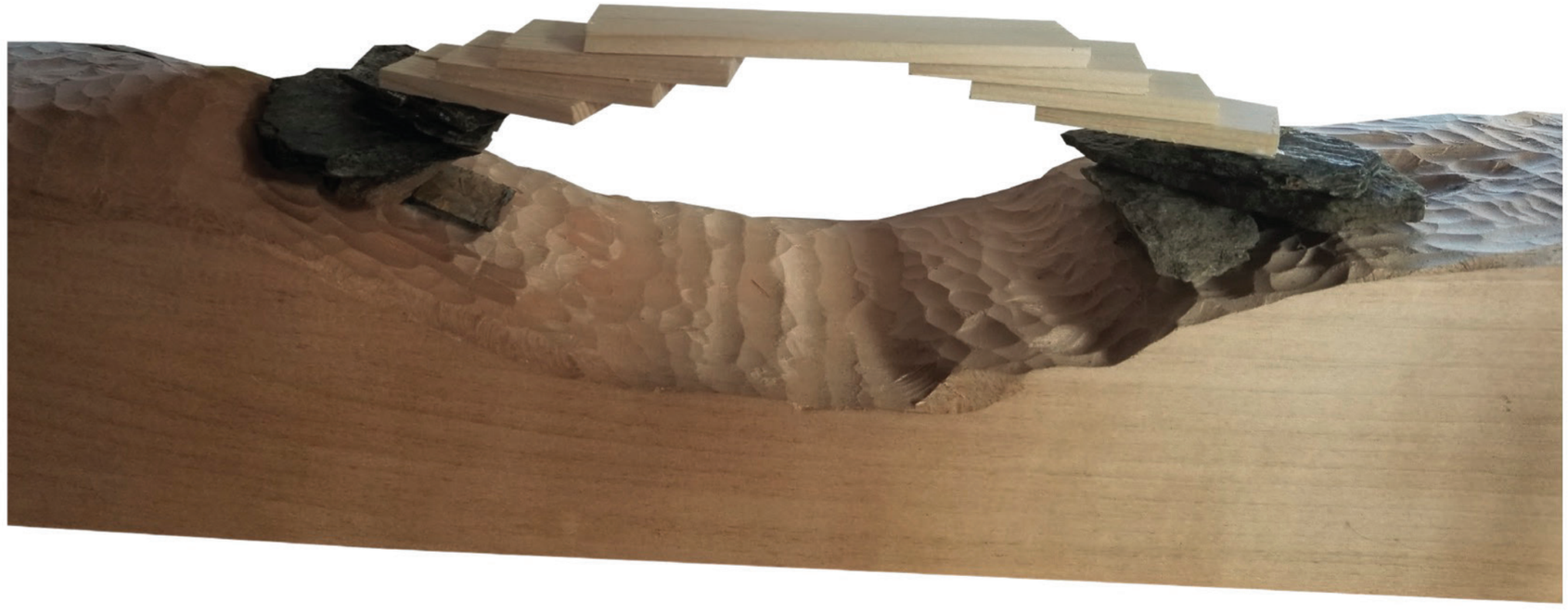




Stepped Bridge
Site A (Old Bridge Site)

Caminada
Special destination at the top - maybe wider platform
Why the layers
Argue why
- Not long enough trees
- Available local resources

Angle on cable might be too flat
Increase height of construction to handle forces at either end
Argue experiences
- height view



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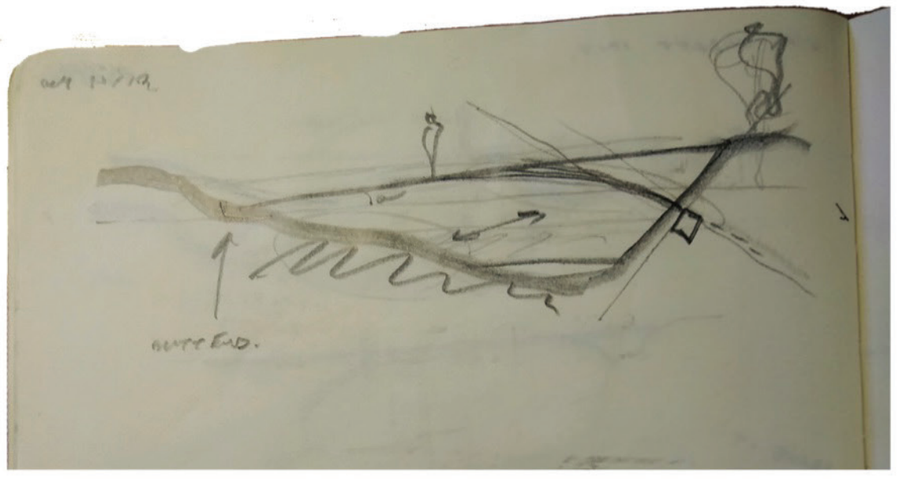
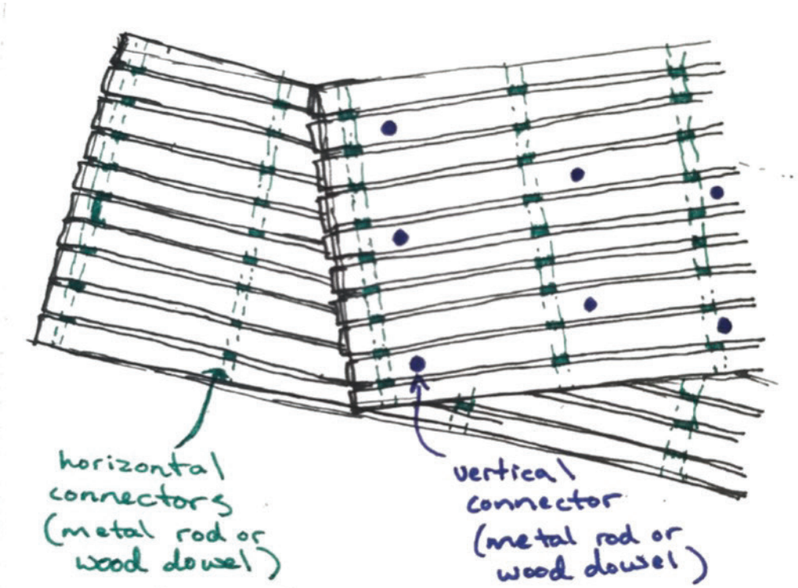


Leap Bridge
Site B (Skin Rock)

Caminada
Recognize the differences between the 2 places, the edge conditions
Potential of a material and its essence
Rock as strength, as the anchor
Cross bridge to moss, which is soft and has feedback from the bridge rebounding
Joint detail would rot, think about vertical drainage and use drip edges
How would you get the most out of the rock

Conzett
Small incline on the bridge deck, but not curved
Think about where the river would flood and collect in water, ensure it is designed accordingly
Spaces between beams, especially where lengths of wood are connected
Flip bridge, so the taller side has the below support; stronger anchor
Static - Pushing force - Floating member (in section). The side on skin rock is butted into the rock, versus the other side is perpendicularly supported

FIRST ITERATIONS

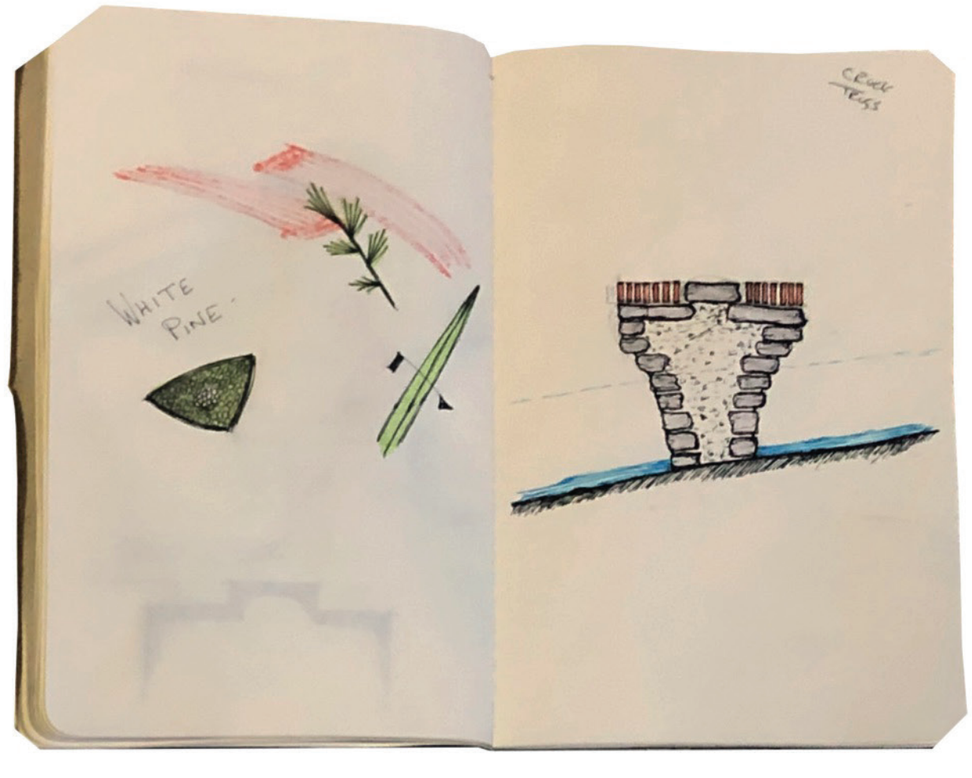


DESIGN ITERATIONS GROUP BRIDGE DESIGNS

Bridge Name
Site C (Waterfall)

Caminada
Be honest with the material - no stone veneer
Bridge deck is simple and quiet in design ... design focus should be on the stone
Be aware of how the water will react with the stone elements
Forces on BOTH sides of the stone, like in biking there will be a "draft" effect
Stone may have a tendency to "upheave"
Connect two bridges with wood at centre instead of stone for continuous feeling

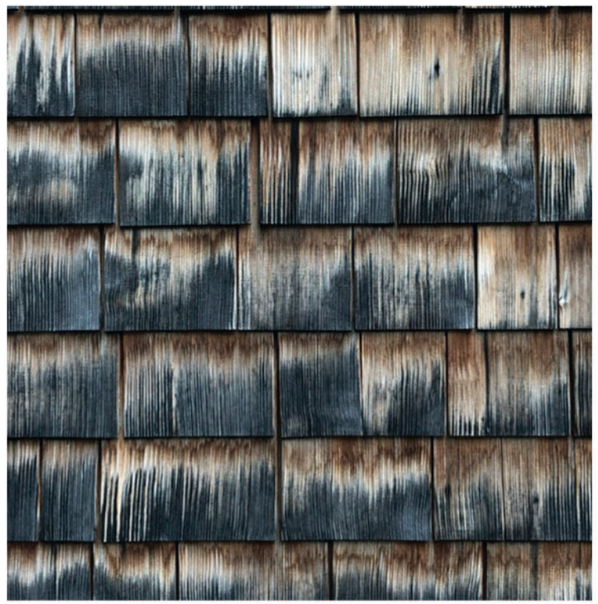
Conzett
40-50 cm width - develope stone profile in parallel to flood lines
Look to lighthouses for how they connect with the stone + resistant to water forces
Create a sawtooth profile on the bedrock to lock in the stone structure
Study the direction of water flow to know how the water will hit the rock
Shorter ash spans (Connect to each shore sooner)
Focus on the stone - consult + respect the stone contractors



MATERIAL STUDY

Cedar Siding

Cedar Siding

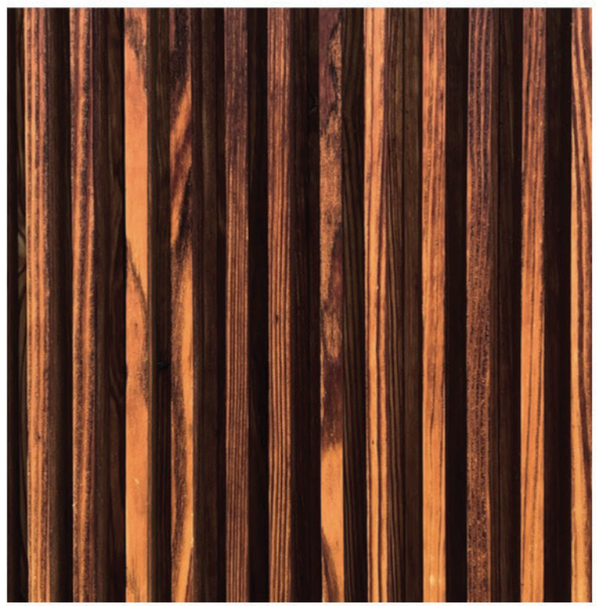


Cedar Siding

Cedar Siding

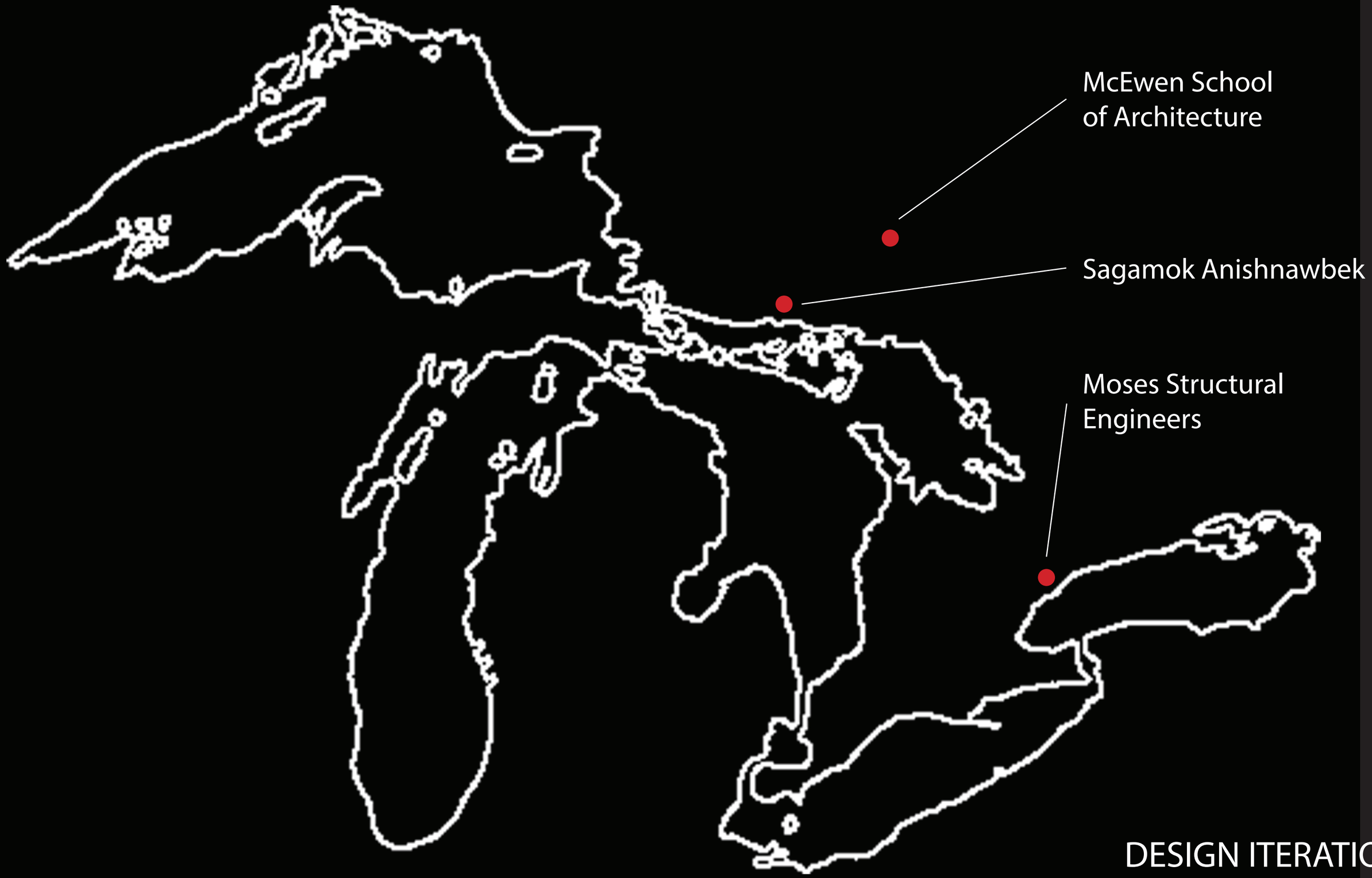
Slate Shingles

Tin Siding



Cedar Siding

Cedar Siding



DESIGN ITERATIONS

COMMUNITY CONSULTATIONS

ROSS ASSINEWE SAGAMOK ANISHNAWBEK
MANAGER OF LANDS, RESOURCES AND ENVIRONMENT

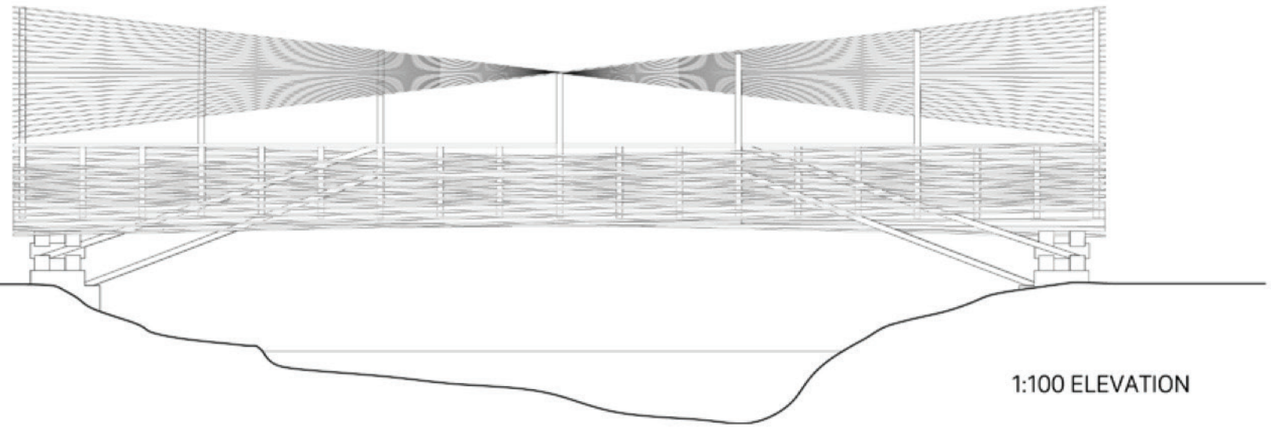
ROEL TEUNISSEN PARKS ONTARIO
PARK PLANNER AT MINISTRY OF NATURAL RESOURCES

[Aidan Lucas, digital photograph, November 2019]

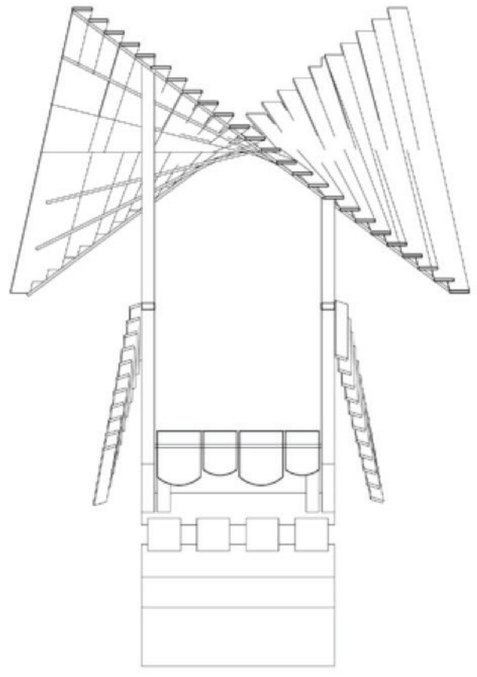
[Aidan Lucas, digital photograph, November 2019]

SECOND ITERATION

1:100 PLAN

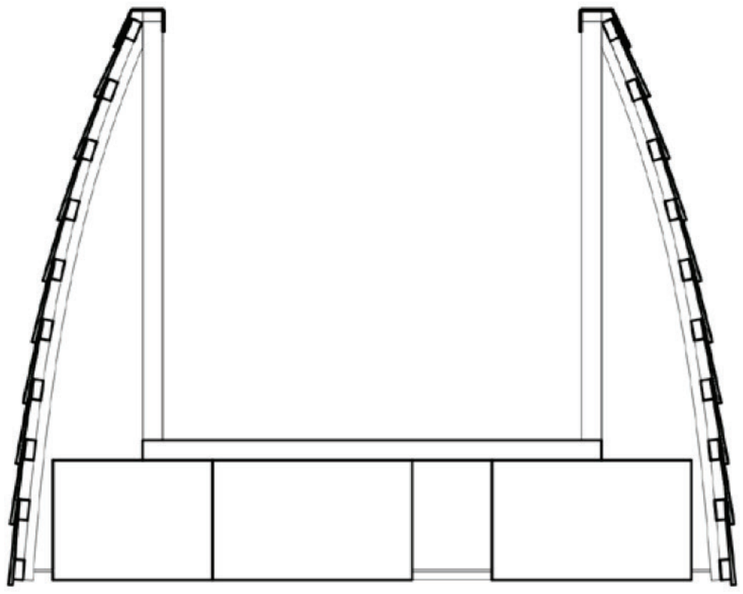


1:100 ELEVATION

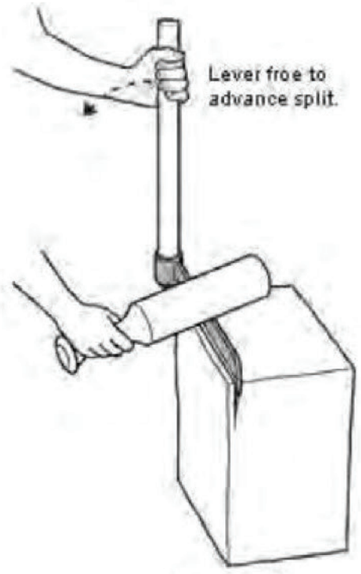


1:50 SECTION

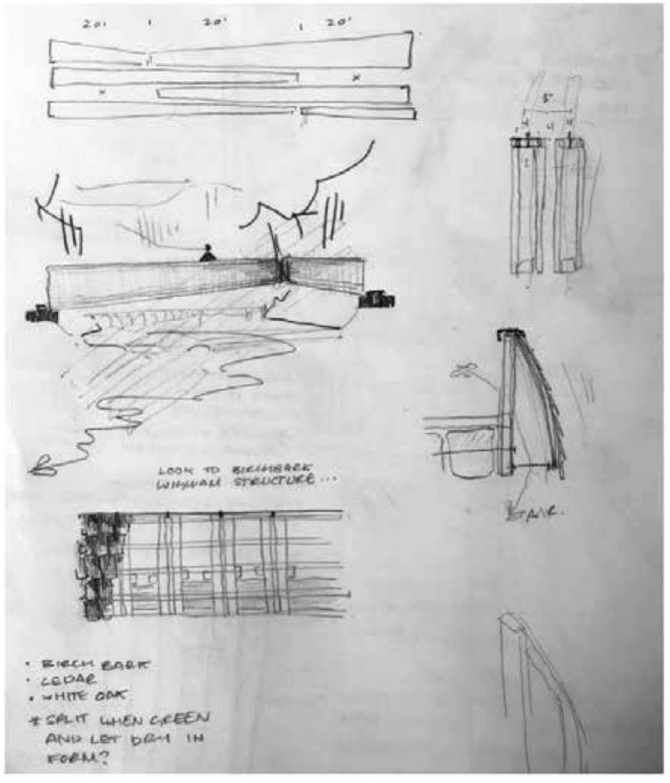
SECOND ITERATION



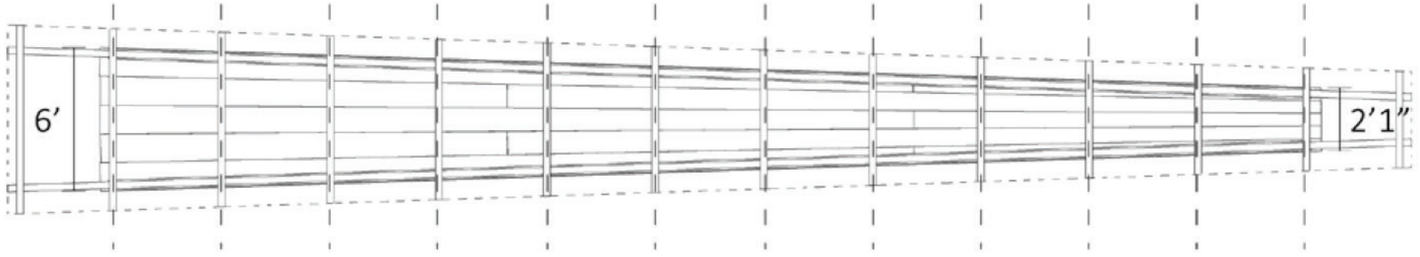
sketch

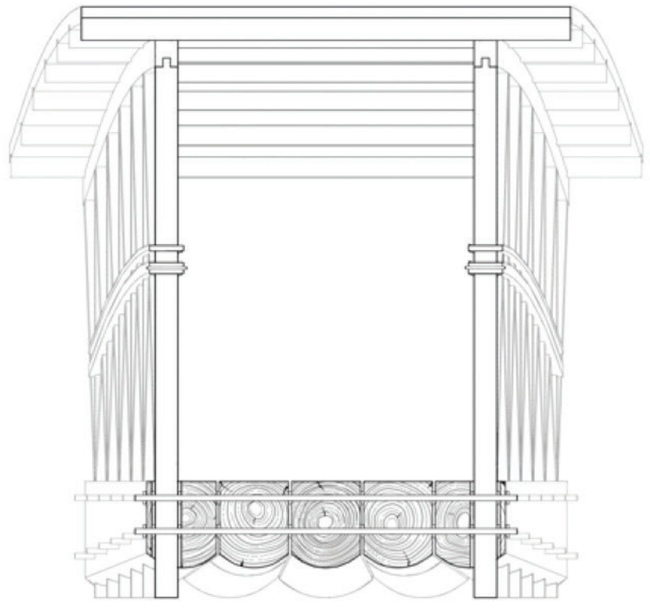


Making shakes



SECOND ITERATION





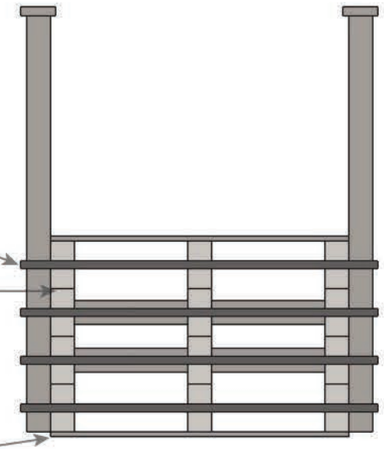
SECOND ITERATION

4mm steel rod running through tamarack pieces with bolts on either end to tension the pieces together.
100x100mm tamarack blocks running along the steel rod to act as a spacer.

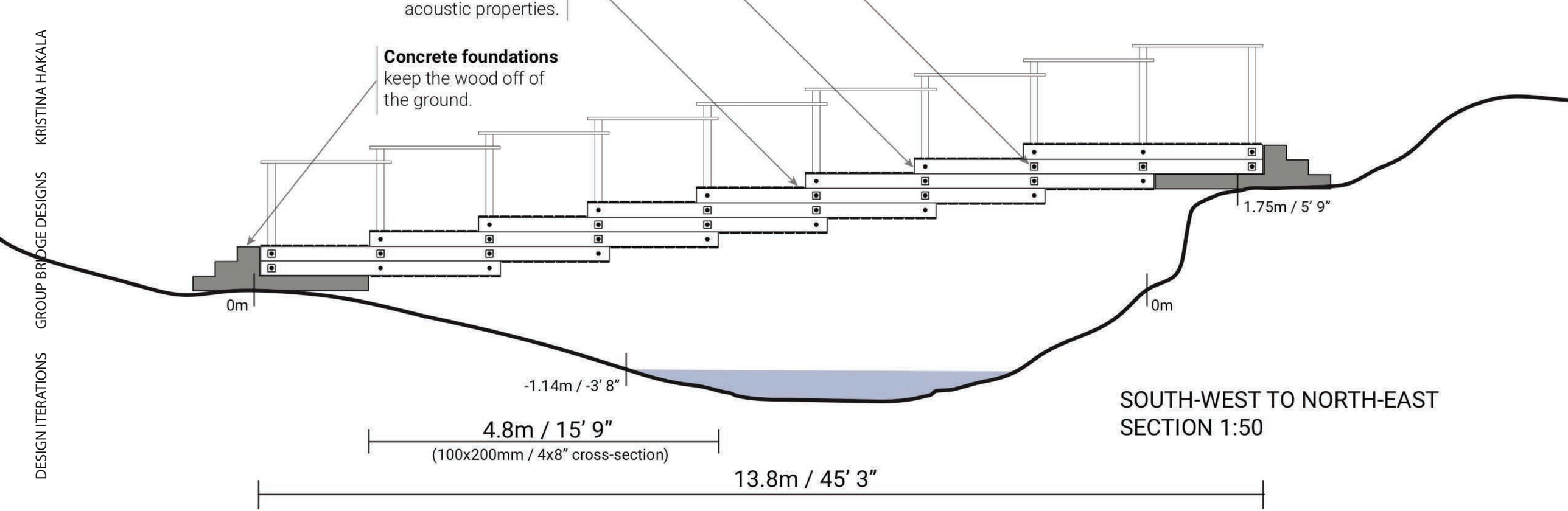
100x200mm tamarack timber 4.8m pieces stacked on top of each each to create stairs.

20x400mm cooked ash boards spanning across the top and bottom of the tamarack members. Having the boards on the top and bottom closes in the structure and plays with the acoustic properties.

Concrete foundations keep the wood off of the ground.

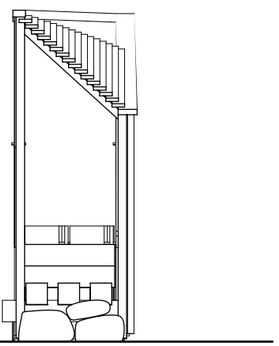


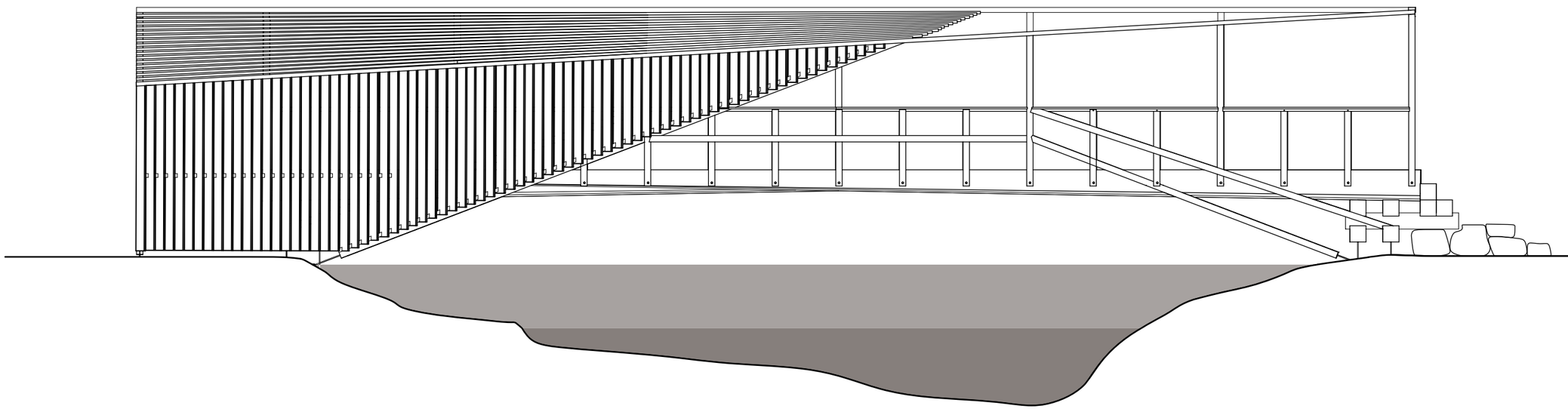
NORTH-WEST TO SOUTH EAST
SECTION 1:25



SOUTH-WEST TO NORTH-EAST
SECTION 1:50

THIRD ITERATION





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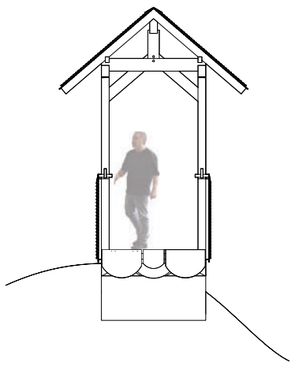
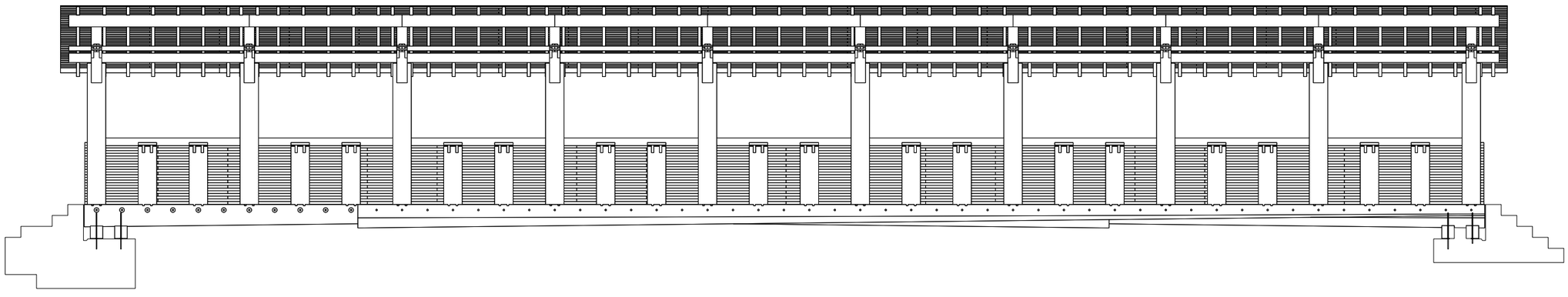


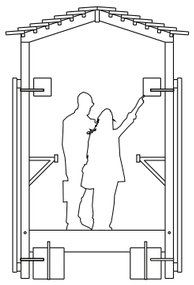


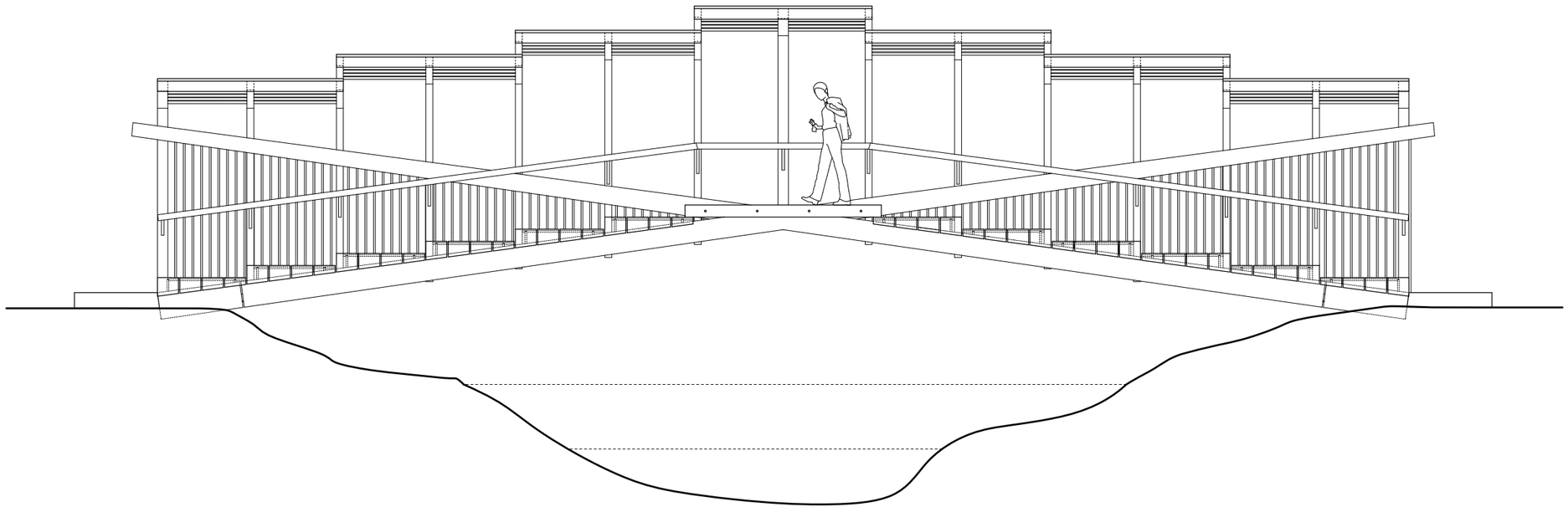
DESIGN ITERATIONS THIRD ITERATION DAVID GAGNON + ALEXANDER SCALI

TIMBER BRIDGE

David Gagnon - Alexander Scali

THIRD ITERATION





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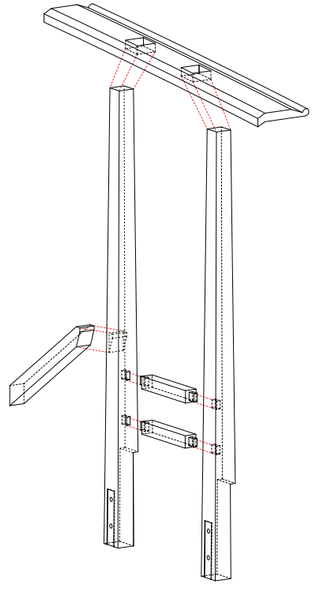

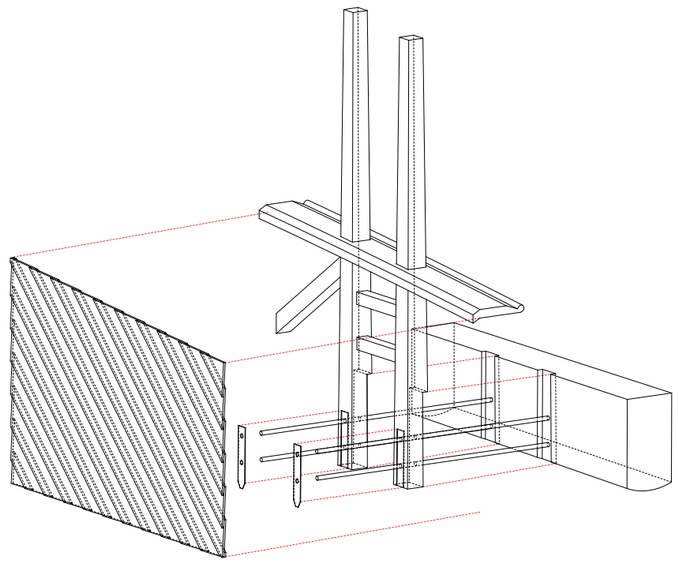

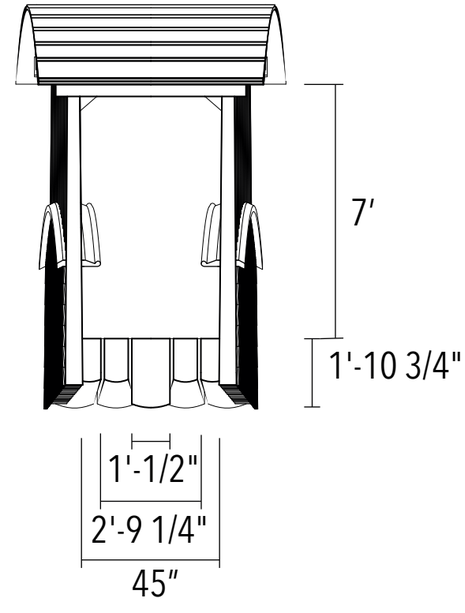

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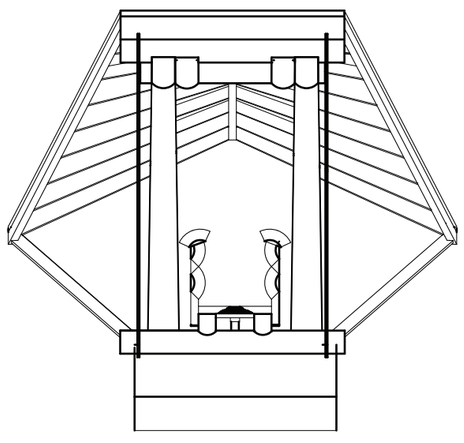
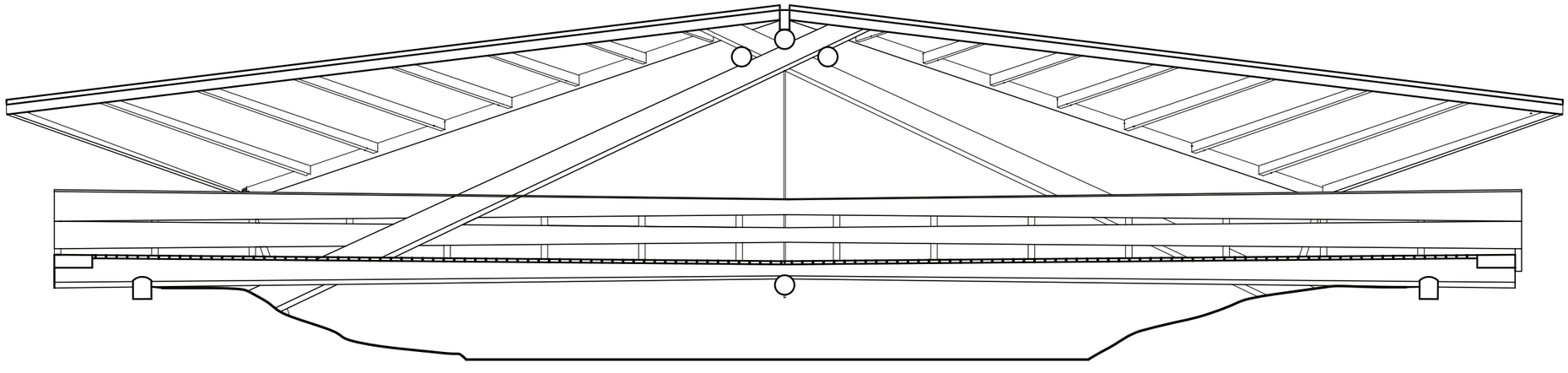
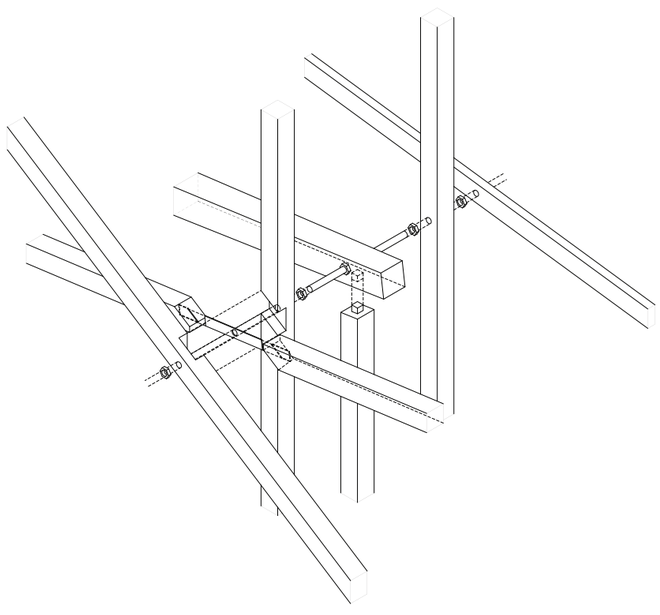


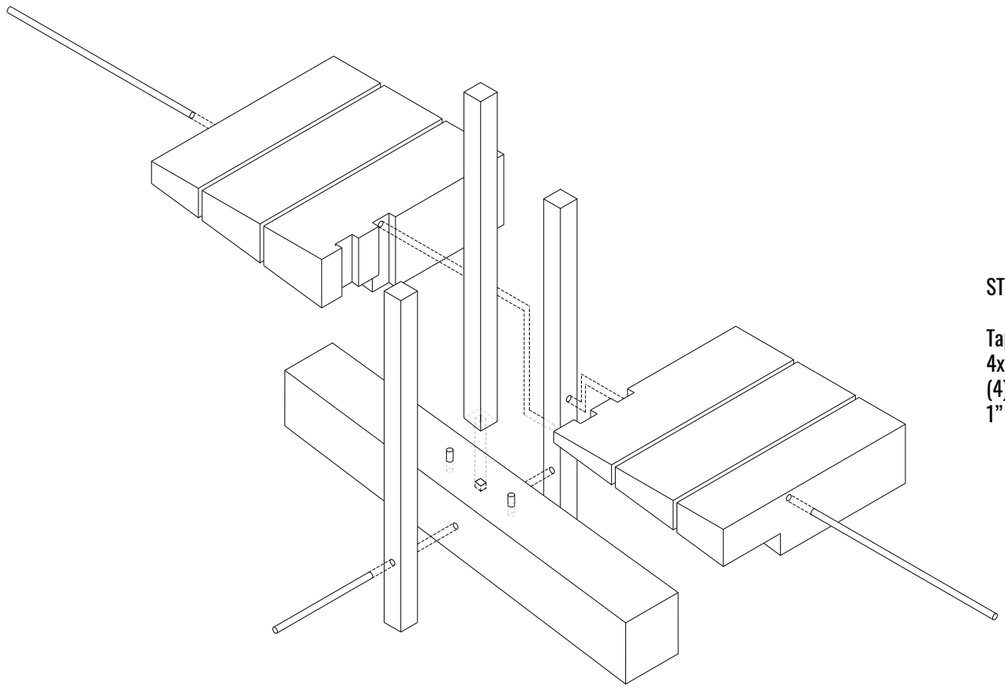


FOURTH ITERATION



WALL DETAIL

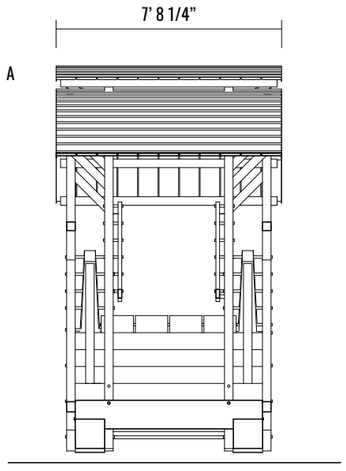
4x4” wood posts
2x4“ wood railing
1” threaded steel rod with nuts
Steel plate



STEP DETAIL

Tapered wood structural member
4x4“ wood post
(4) 12” wood blocking for steps
1” threaded steel rod with nuts

A



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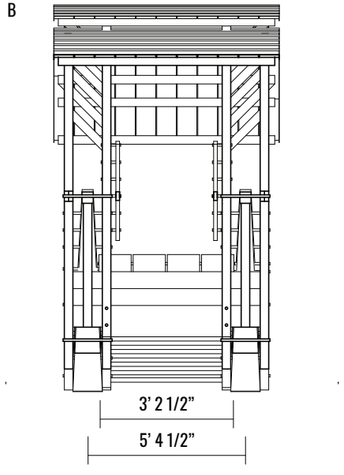
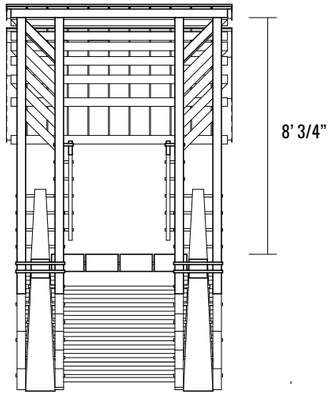
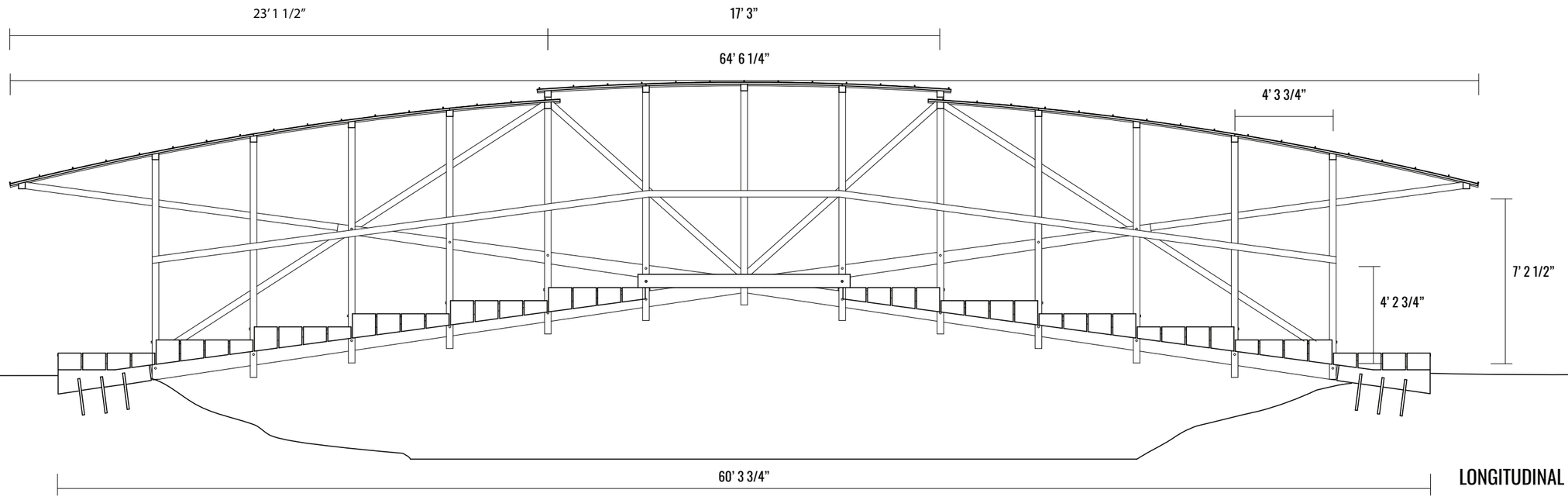


C



CROSS SECTIONS 1:25



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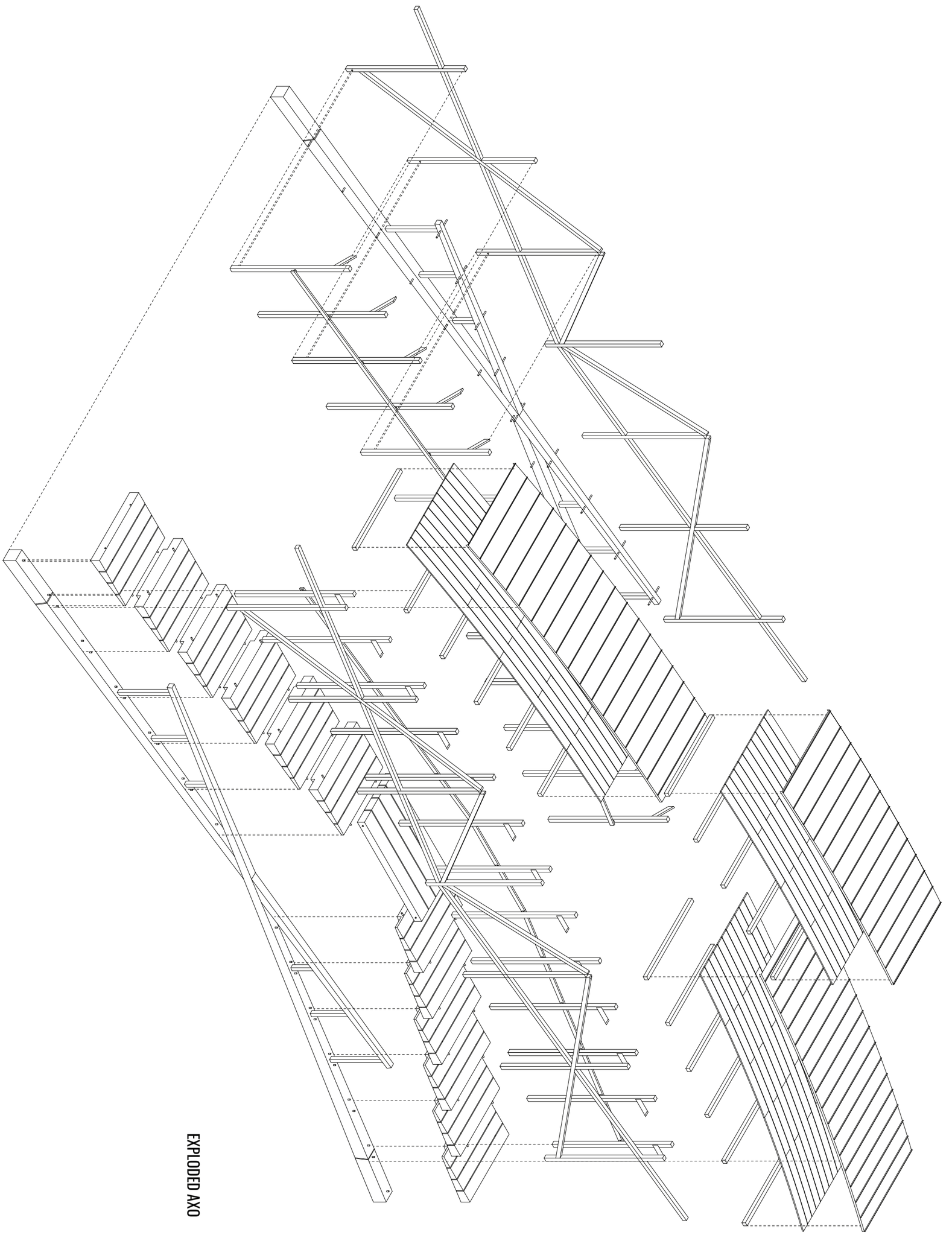
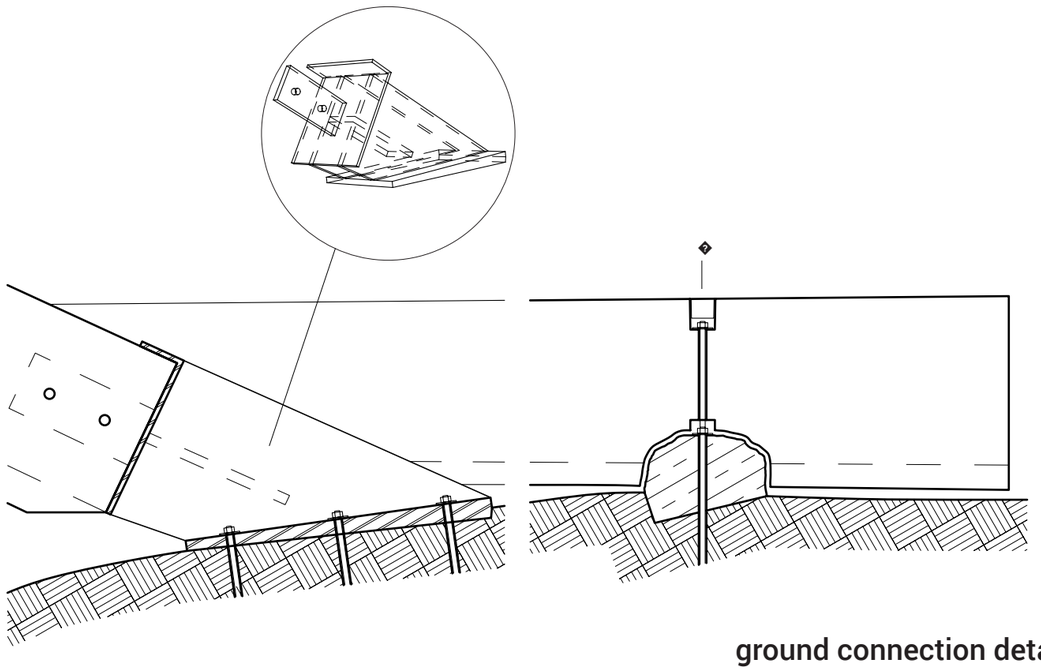
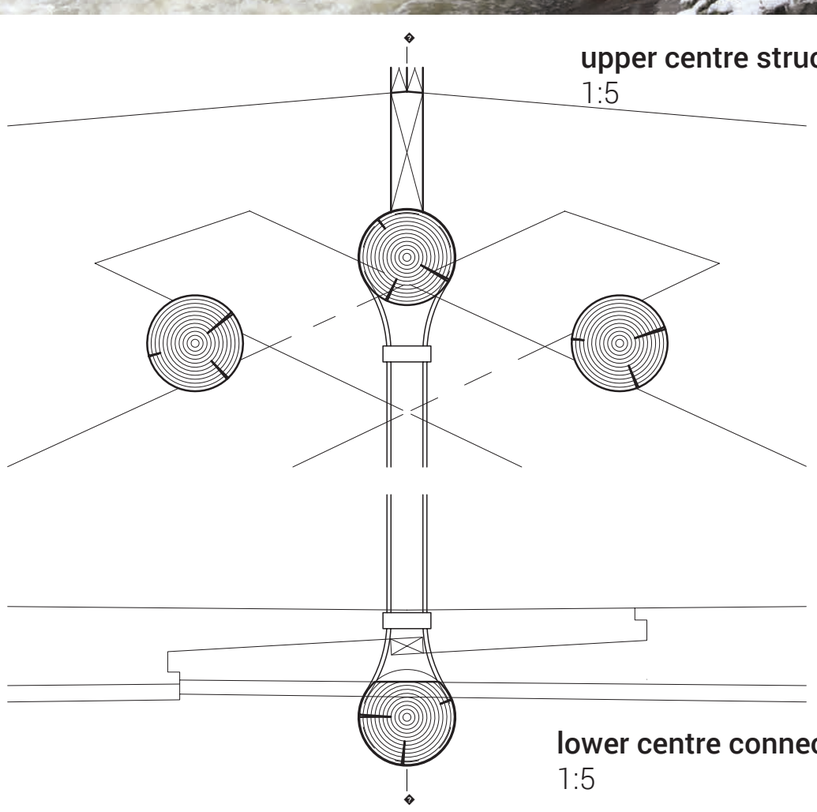


EXPLODED AXO

FOURTH ITERATION

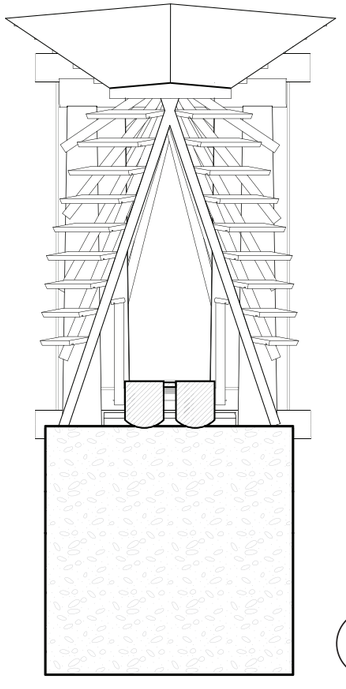


ground connection details
1:5

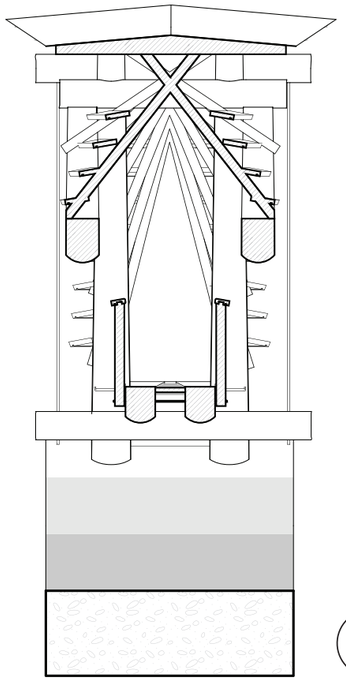


upper centre structure detail
1:5

lower centre connection detail
1:5



section A
1:25



section B
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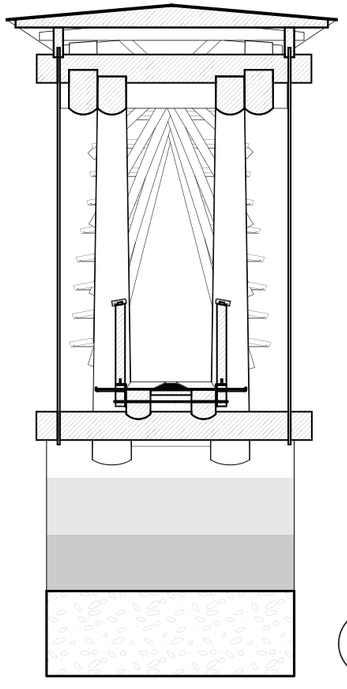

section C
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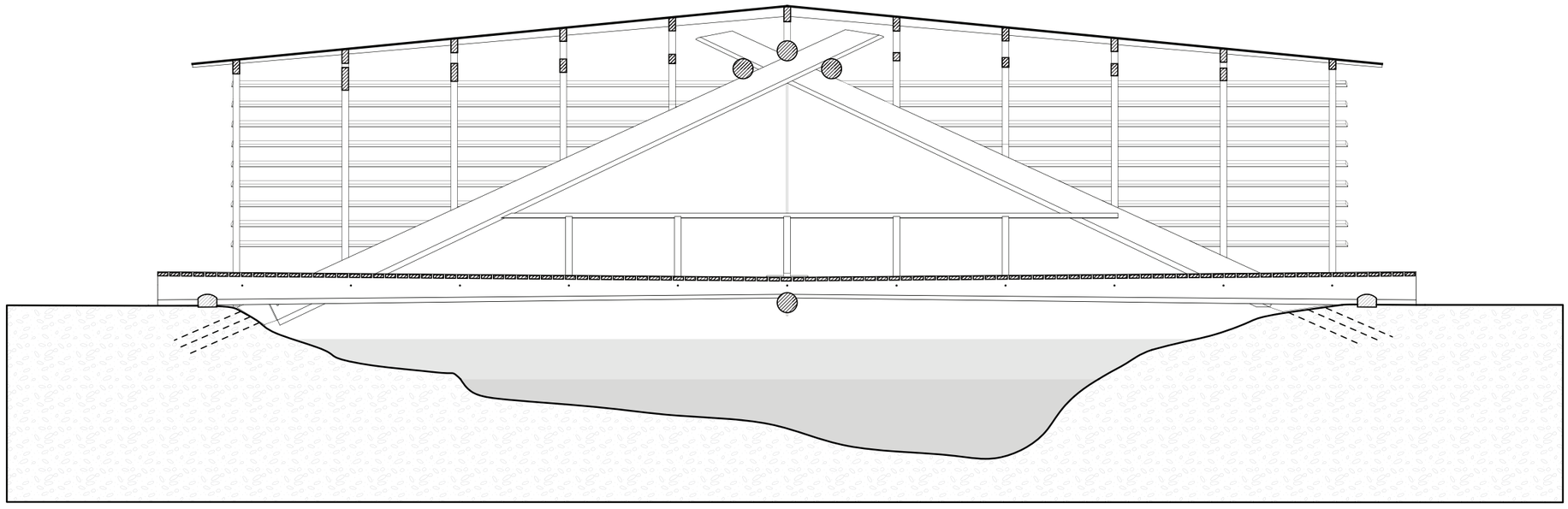

section D
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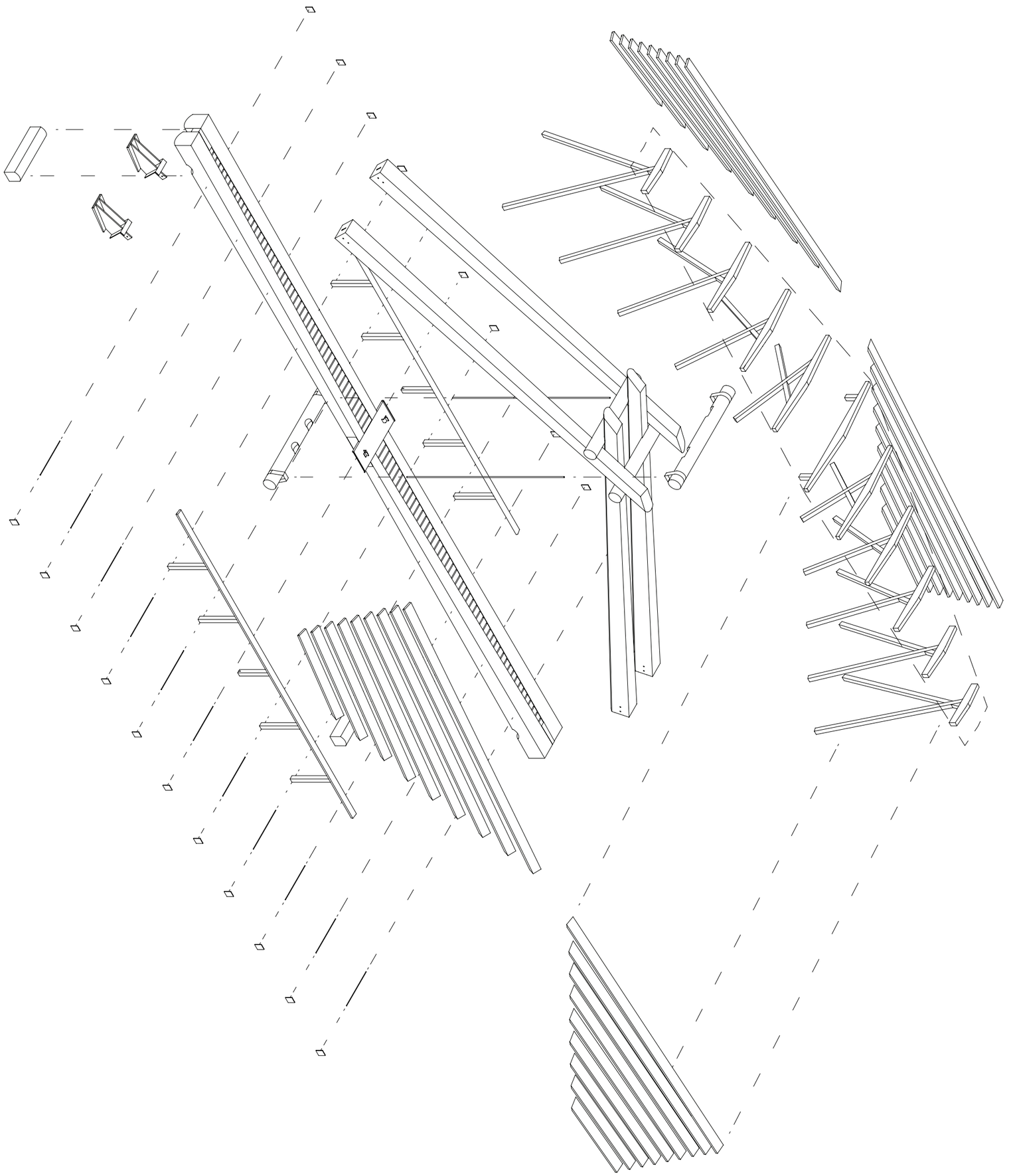
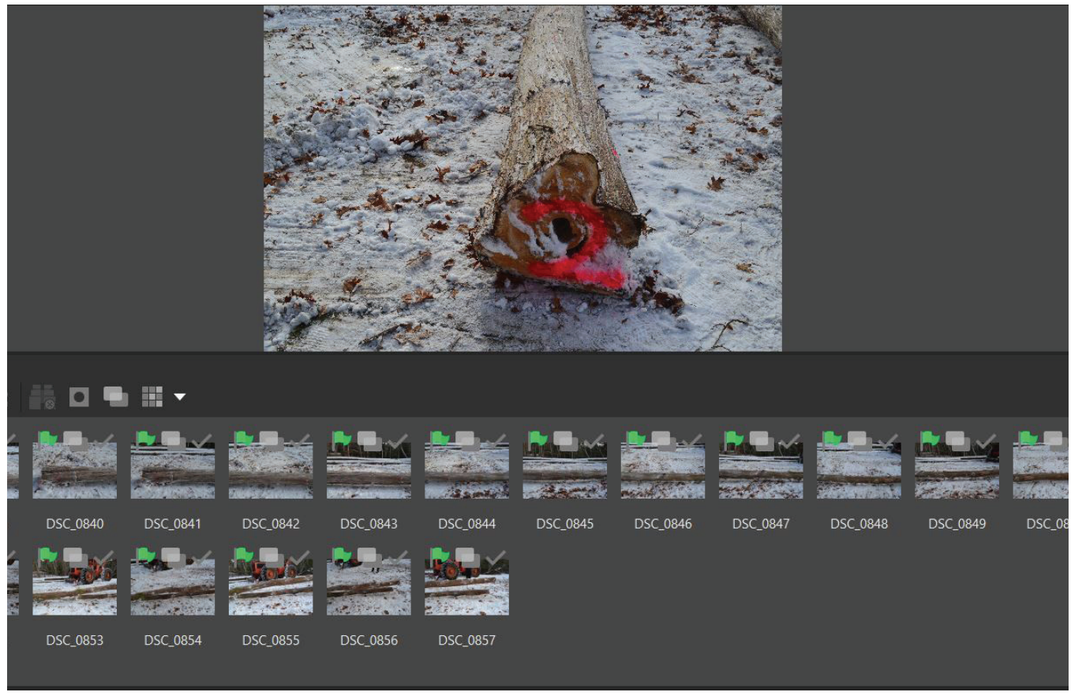


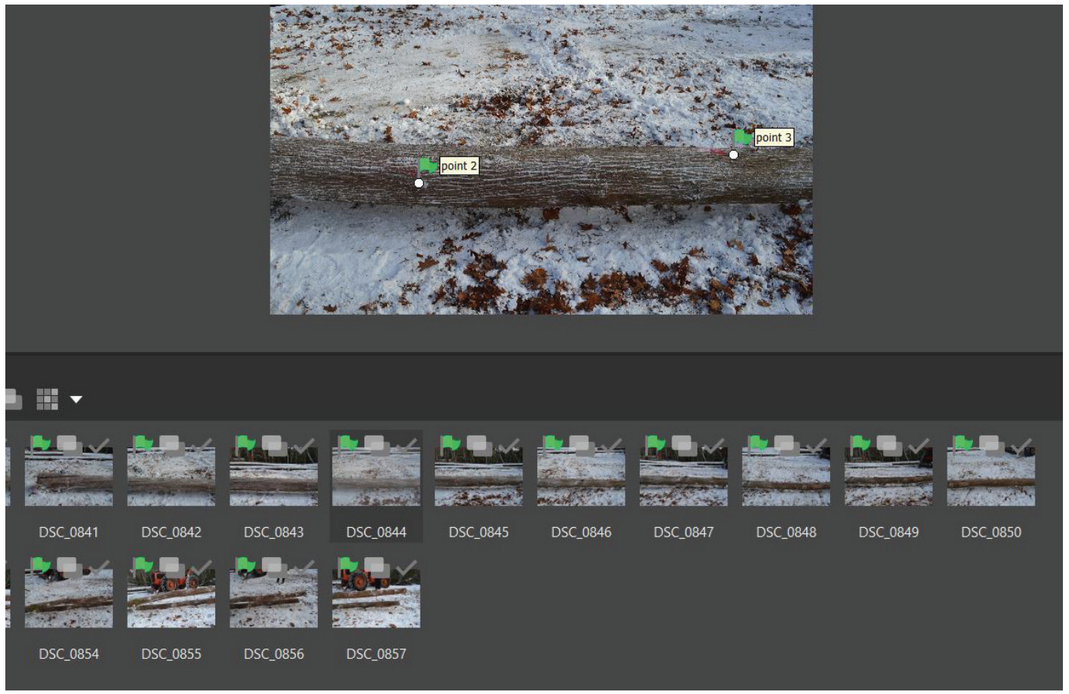
exploded axo
1:25

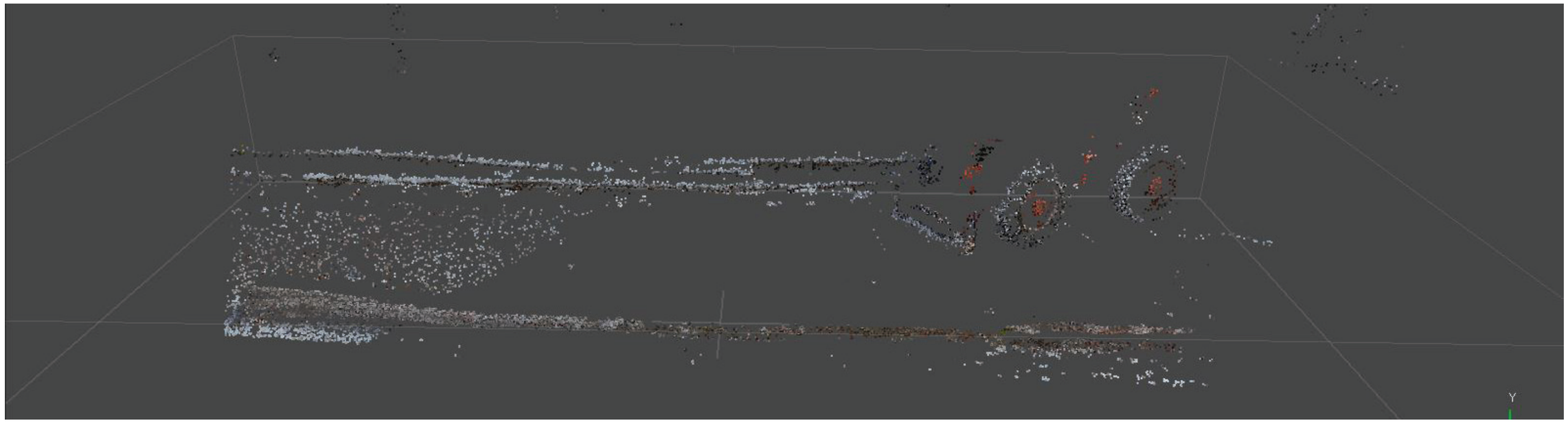
MOSES STRUCTURAL ENGINEERS

ENGINEER CONSULATION MOSES STRUCTURAL ENGINEERS

CEDAR LOG PHOTOGAMMETRY

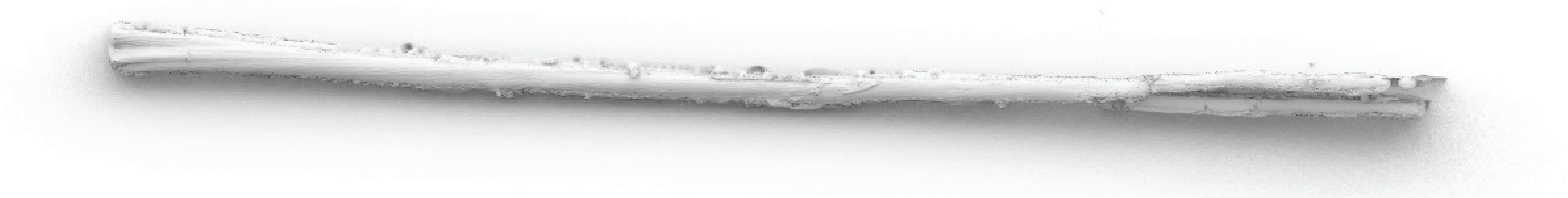




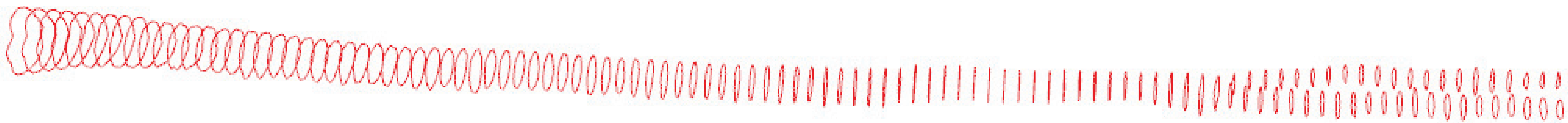


PHOTOGAMMETRY CEDAR LOGS

PHOTOGAMMETRY CEDAR LOGS



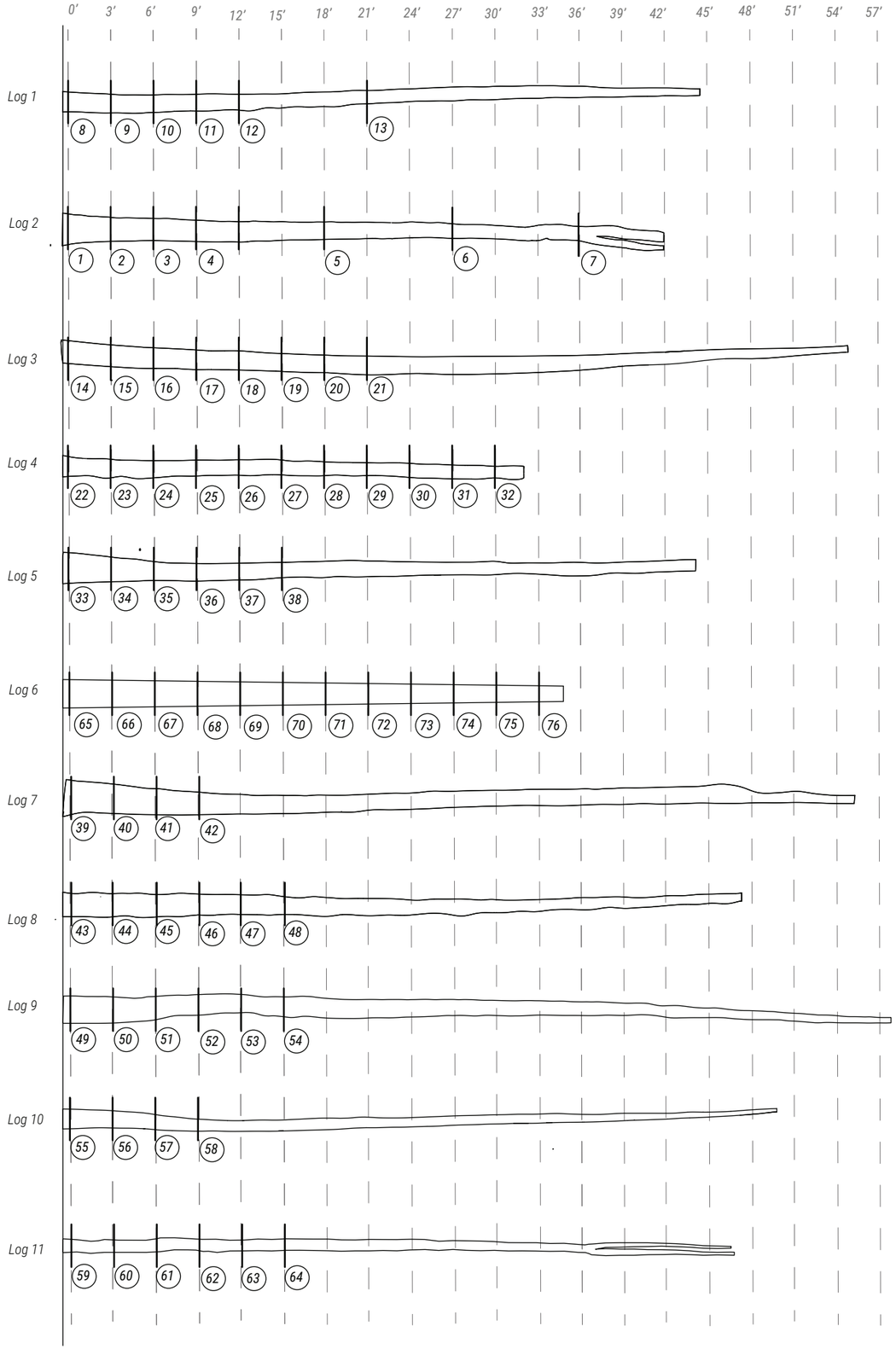
PHOTOGAMMETRY   CEDAR LOGS



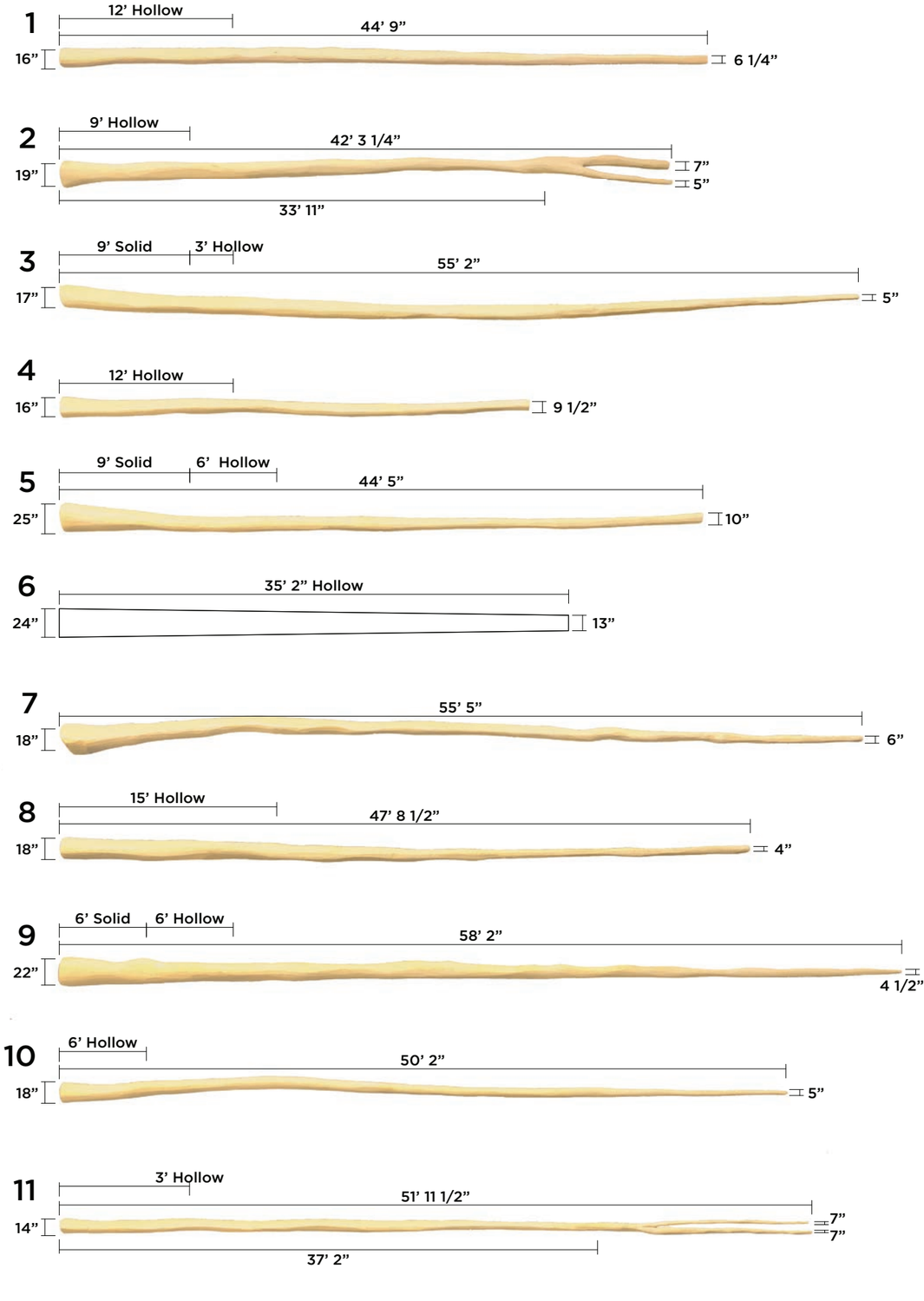

LOG 5 FRONT
LOG 5 TOP
LOG 3 TOP
LOG 3 FRONT
LOG 4 TOP
LOG 4 FRONT
LOG 2 TOP
LOG 2 FRONT
LOG 1 TOP
LOG 1 FRONT


LOG 9 FRONT

FINAL DESIGN CEDAR LOG RESISTOGRAPH TESTING



Resistograph Test Layout



FINAL DESIGN

FINAL DESIGN

SITE PLAN

LOW WATER

HIGH WATER

WETLAND

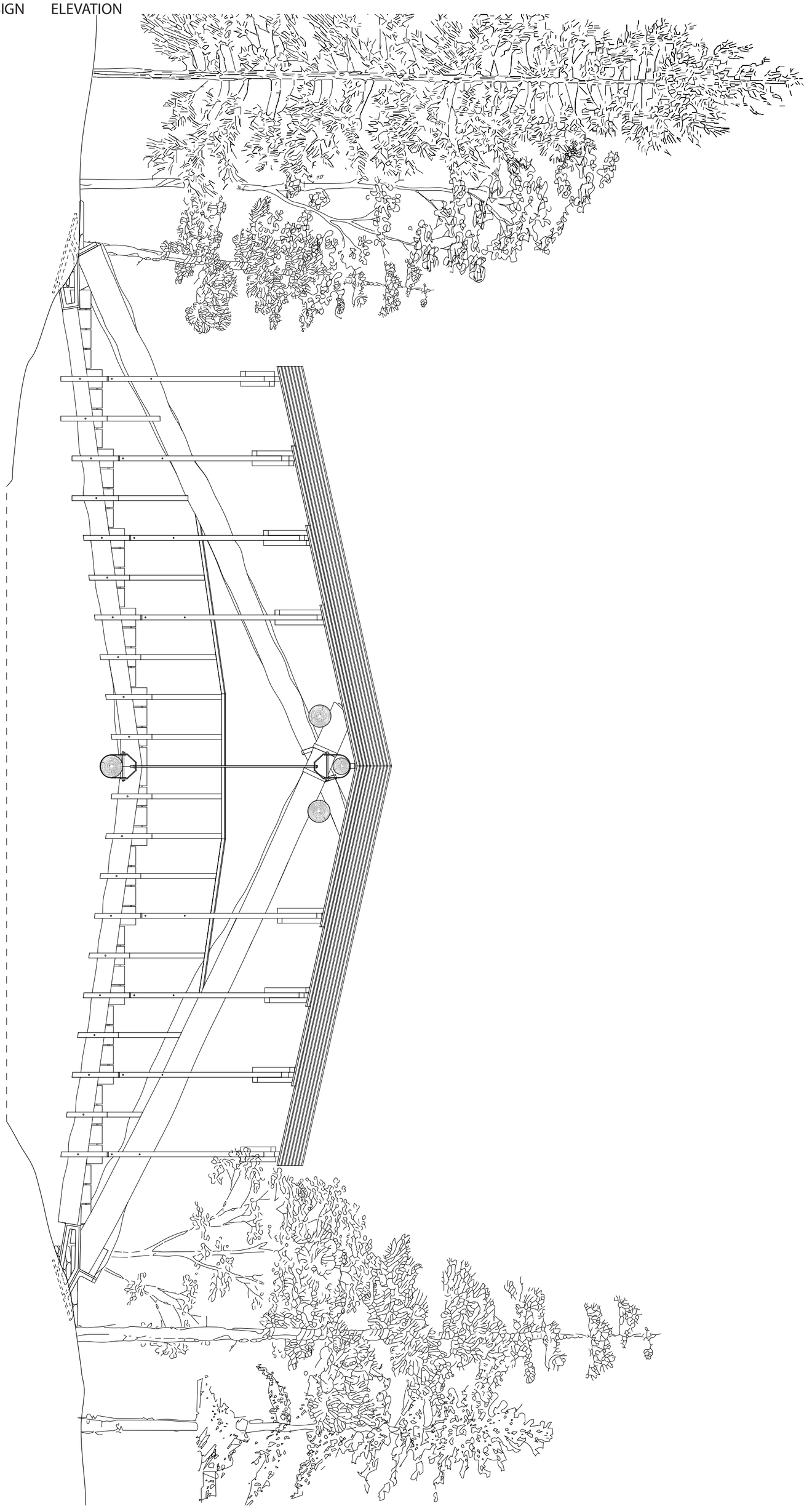
EXISTING BRIDGE

HEAVENS GATE TRAIL
[KITCHITWAA SHKWAANDEM]

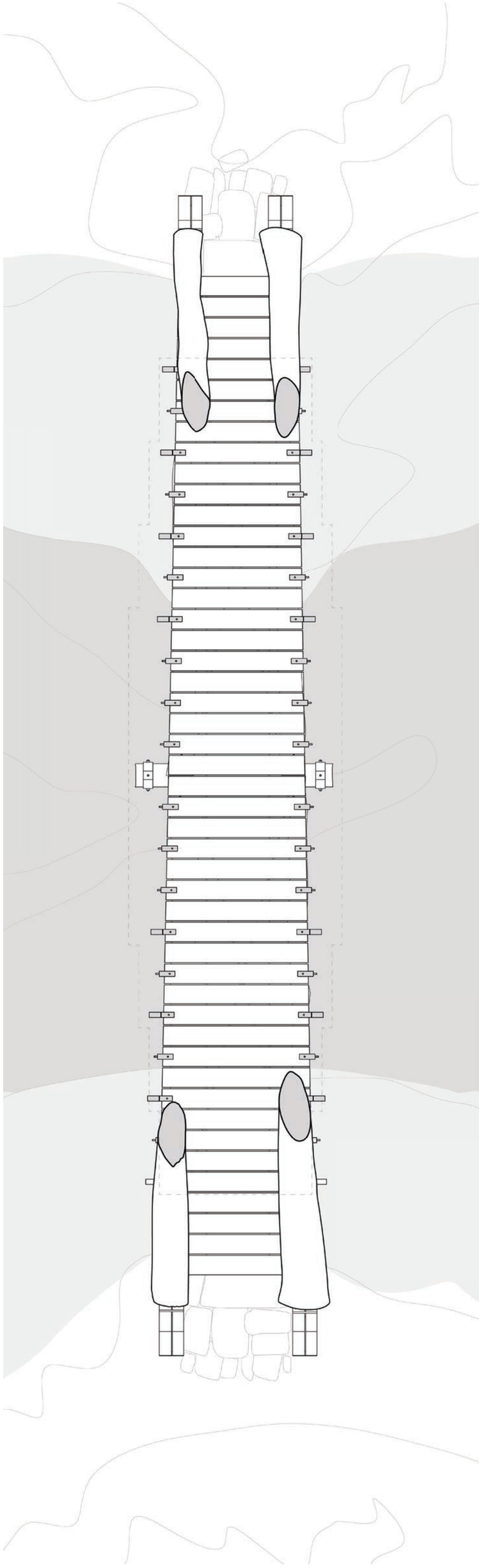
OTHER TRAILS

PROPOSED TRAIL

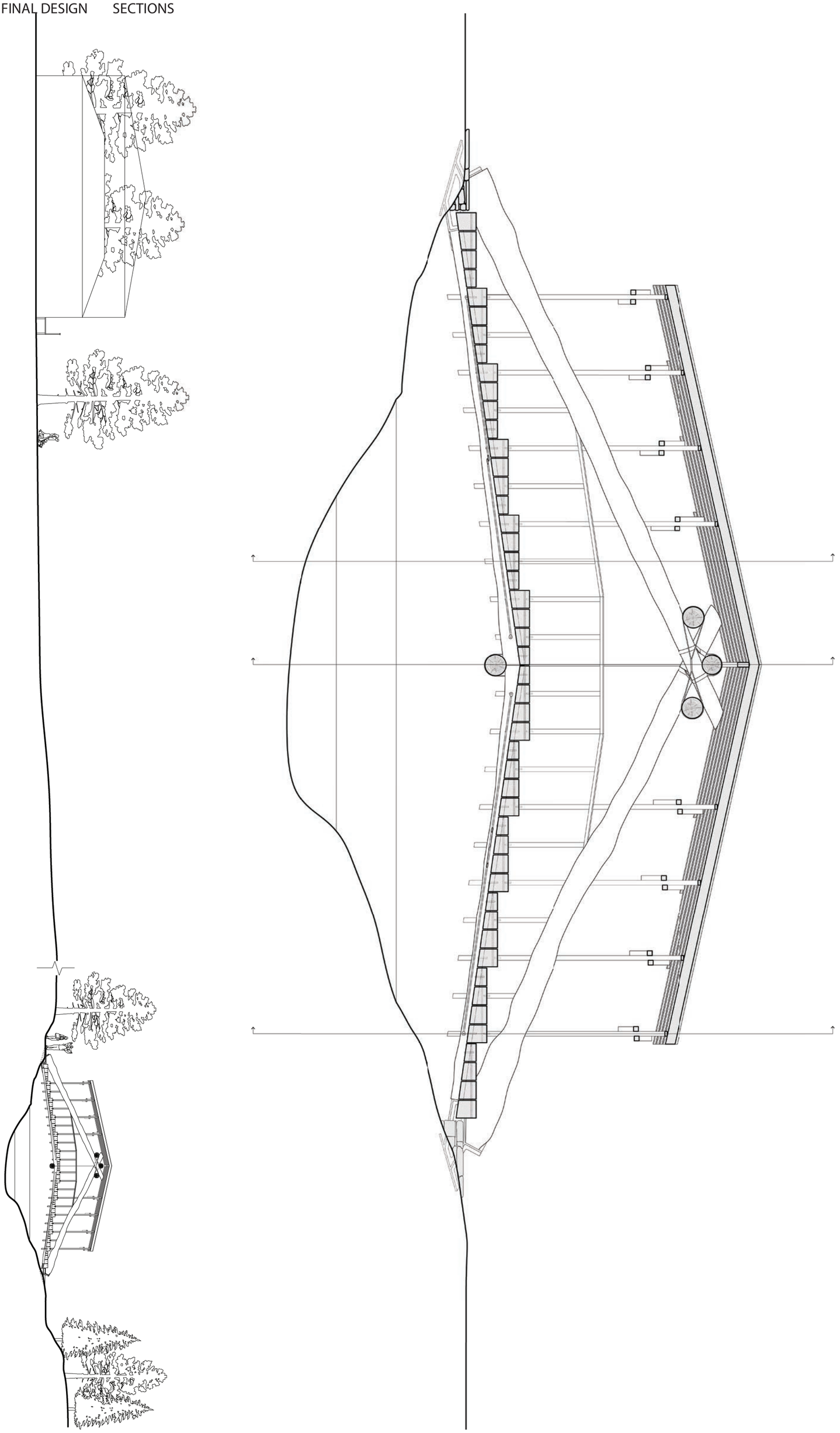
FINAL DESIGN ELEVATION

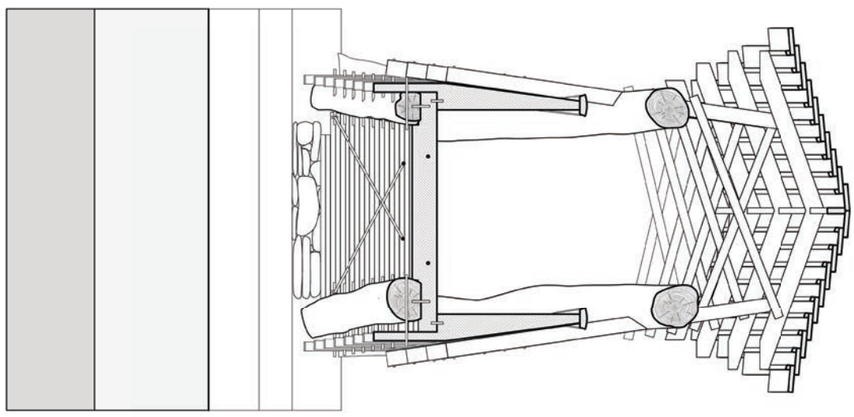


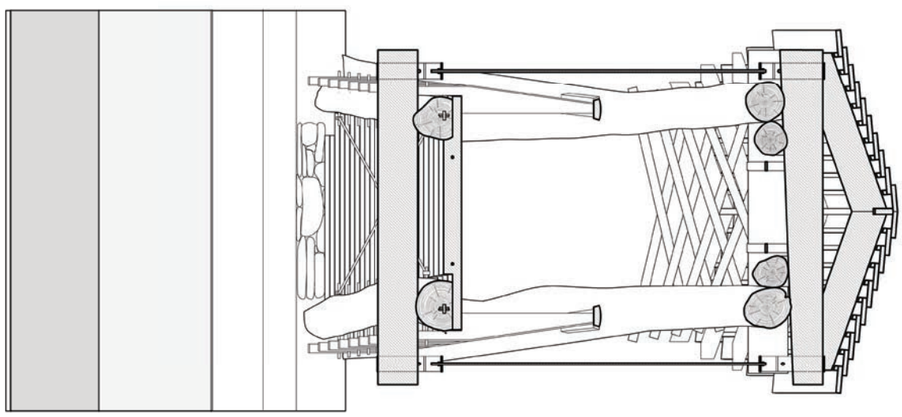
FINAL DESIGN PLAN

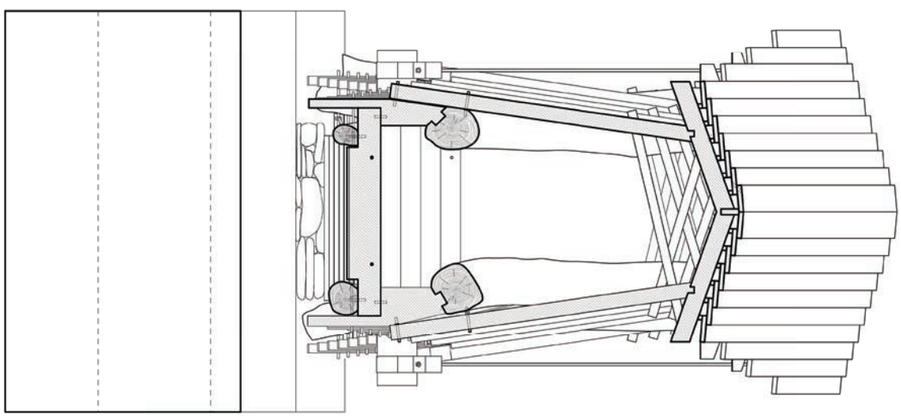


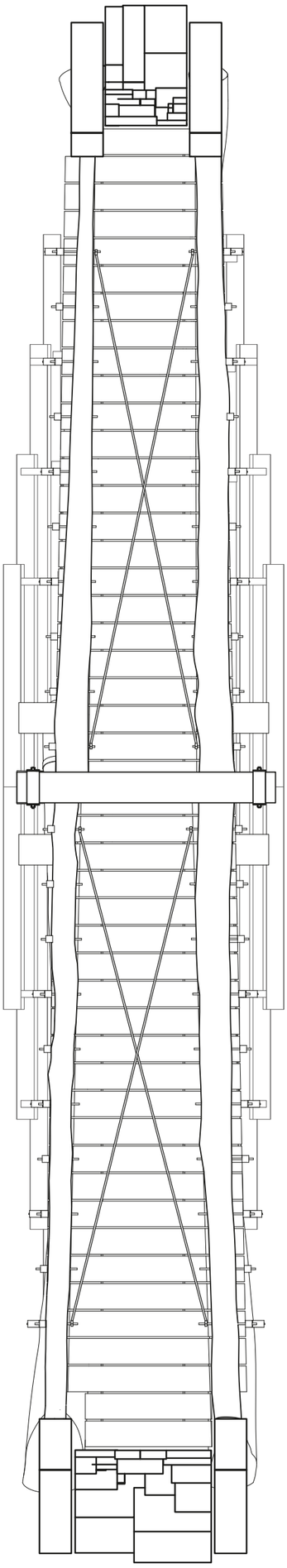
FINAL DESIGN SECTIONS

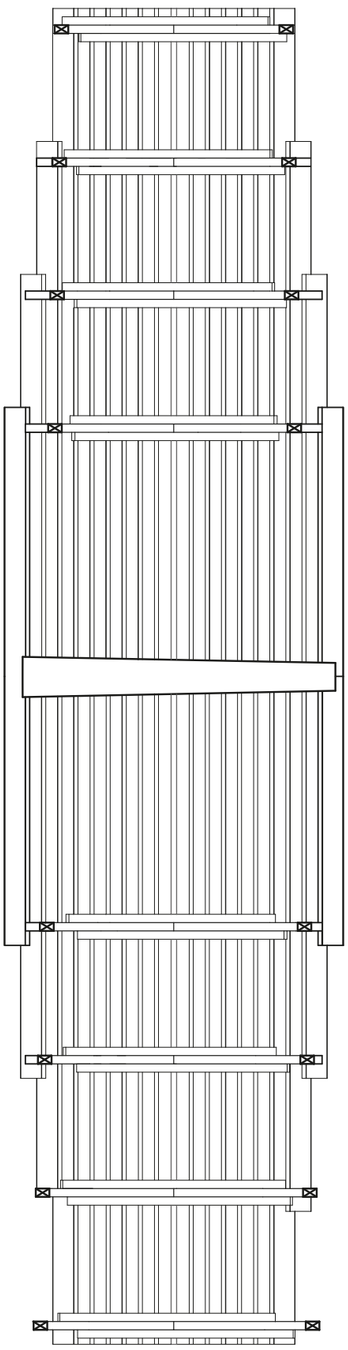












FINAL DESIGN AXO