

oli

Advanced Sewing Lab
2020 Spring
Michael Yan

function
+
lifestyle

INTRODUCTION

PROJECT PROPOSAL

COLOR/SURFACE



THE VISUAL STORY

COLOR

Muted, mid value, dominated with olive green and khaki.

SURFACE

Organic surface mix with distress metal and tiny stripe accent.

FORM

Subtle texture and small pattern.

CONSTRUCTION

Compression knit
Padded
Tight fit
Clean seam
Special stitching
Heat-melted layering



Padded
Supportive structure



Engineered knit pattern
Diff stretch area

Tight fit



Clean seam

Subtle texture
Accent color
Special stitching



Heat-melted layering

DESIGN/Form

Tight fit
Light weight
Accent color
Reflective element
Day & Night



Subtle repetitive pattern
Reflective Element



Tight fit
Subtle color change
Diff material



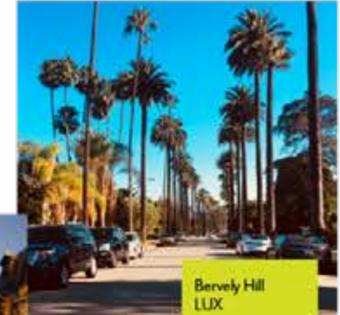
Reflective thread engineered



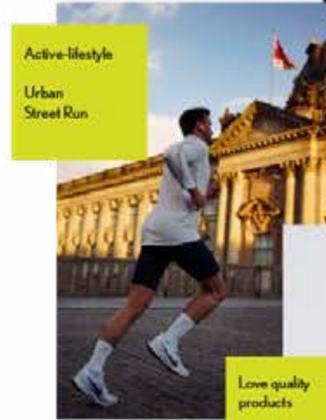
Stitching create pattern & structure

LIFESTYLE/CUSTOMER

Urban
Quality LUX
Active-lifestyle
Low key
Simple Graphic



Beverly Hill LUX



Active-lifestyle
Urban
Street Run



Love quality products
Low key



Simple Graphic



Sport meet Fashion

“He felt massive energy from the knee brace and his knee pain was gone. He gained his supernatural power...”

THE LATE NIGHT FLASH(Knee Brace)

Once there was a FBI special agent, whose name is Chris. He was one of the best undercover in the organization. Justice was in his blood and he believed he was born to fight crime. One day, he was on a mission to collect crime evidence of an international drug cartel in New York city. He fell down from the third floor when he was trying to escape from the crime scene. He successfully escaped from the mafia but twisted his knee when he landed.

Chris settled down in a motel and tried to contact his supervisor. Unfortunately, his supervisor, Nick, was actually a member of the drug cartel. Nick deleted Chris's undercover file. Now no one could prove his identity. He couldn't trust anyone and had no way but started his homeless life.

Chris started his homeless life and found a spot under a bridge as his new home. Every time there was a robbery or violence he saw, he wanted to do something but couldn't do anything because he was injured. Time passed day by day, Chris met his homeless buddy, Dave, who was a trash collector. Dave knew that Chris's knee was injured and gave him a knee brace he found in a trash can years ago. Dave kept the knee brace for years but never got the chance to use it. Chris said thank you and took the knee brace from Dave. It was late at night so he didn't put it on right away and slept in his tank as usual.

A loud gunshot woke up Chris from his sweet dream. There was a robber who was robbing the gas station across the street. Chris wanted to do something and put on the knee brace which Dave gave him. He felt massive energy from the knee brace and his knee pain was gone. He gained this supernatural power which allowed him to move really quickly. He knocked out the robber and returned the money back to the gas station in a sec. He moved really quickly that people couldn't see.

Chris became the guardian of this city. He fought the crime at night as he didn't want anyone to recognise him. The reflection on the knee brace became a lightning when he quickly moved around. People in the city called him “The Late Night Flash”. He is now ready and about to get back what he lost.

BRAINSTORMING EXERCISE

Sample 1

- Net / Mesh
- Knit
- Black
- Dif. sizes (hole)
- Dif. shapes (hole)
- Stretchy
 - Verticle
 - Horizontal
 - Bias
- Warm to touch
- Almost pattern
- Doesn't crease
- Flexible
- Rough
- Layering to create opacity



Sample 2

- Knit
- Color thread
 - Grey
 - Silver
 - Black/Charcoal
- Create gradient
- Stip pattern
- Stretchy
 - Verticle (little)
 - Horizontal
 - Bias
- Warm to touch
- Soft
- Doesn't crease
- Flexible



Sample 3

- Laminated
- Brown exterior
- Black mid layer
- Smooth
- Cold to touch
- Stetchy
 - Verticle (little)
 - Horizontal (little)
 - Bias (little)
- Strong
- Crease slightly
- Sharp edge



BRAINSTORMING EXERCISE

What if?

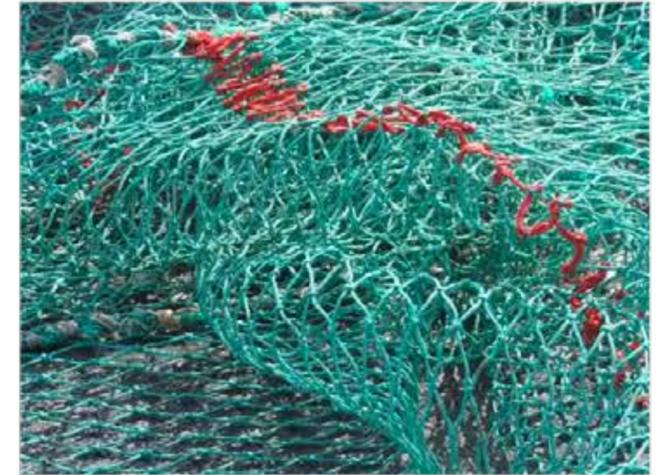
You could wrap eva foam with sample 1 preventing the foam to lose its shape?

You could insert non-stretchable thread in some area of Sample 2 to certain part more rigid?

You could put foam in the middle of sample 3 to provide protection or better insulation?

Sample 1 can be redesigned strategically to be both upper and eyelets of a shoe?

You could roll up sample 3 to fill in space around the ankle inside a shoe?



PRODUCTION PLAN

WEEK FRIDAY	WORK DUE	TASKS TO COMPLETE BEFORE NEXT CLASS (Start on Saturday)	ISSUES TO SOLVE
1		WORK IN CLASS TO DEVELOP PROJECT PROPOSAL FOR NEXT WEEK	
2			
3	<u>DUE- PRODUCTION SCHEDULE</u>	Create Preliminary production plan	Final version of project proposal Revisit proposal wall Materials, sources Rough design - muslin or paper pattern (Knee brace+Ankle brace
4	<u>PROJECT PROPOSAL DUE</u>	Write Fairy Tale	Make rough mock ups Explore materials, etc Locate Mannequin
5	<u>DUE- FAIRY TALE</u>	Cut out all pattern pieces (Hillside) 5x5 Stitching Samples 5x5 Dye Samples to match mood board	Make rough mock ups Pattern development Explore materials, etc
6		Create - Formal 7 week production schedule Prepare for Midterm	Make rough mock ups Pattern development Color Dye experiment Buy Fabric, Thread(Reflective), HeatBond sheet
7	<u>MIDTERM- THEME -INDIVIDUAL CRIT PDF -</u>		Make a decision, stop playing Buy Material for Final (Fabric, Thread, Foam, Heatbond)
8			Photograph Location
9		Start Online class	/
10	<u>DUE - SELF EVALUATION CRIT</u>		Final Sample making
11			Final Sample making 3D Print part
12		Make a plan for Final Presentation Display	Final Sample making Digital model+Photoshop Poster

13			Photo document Work on oral presentation
14		Prepare speech for Final	AV presentation 1 Sample > 3D Model All Experiments, failures Paper patterns
15		FINAL PRESENTATION	

THEME DEVELOPMENT

OPPORTUNITY

*current knee brace (without extra strap)



FUNC-

low

complex

APPEA-

TION

high

clean

RANCE



MOOD COLLAGE



THE VISUAL STORY

COLOR
Muted, mid value, dominated with olive green and khaki.

SURFACE
Organic surface mix with distress metal and tiny stripe accent.

FORM
Subtle texture and small pattern.



MATERIAL



Perfortek Compression Jersey

- Super soft to the touch
- Cool against the skin
- Four-way stretch



NinjaTek TPU 3D Printing Filament

- Bend and flex while maintaining strength
- Able to twist, squeeze, stretch it

MATERIAL



Color Isacord Thread



Reflective thread



Heat n Bond

PROCESS DEVELOPMENT

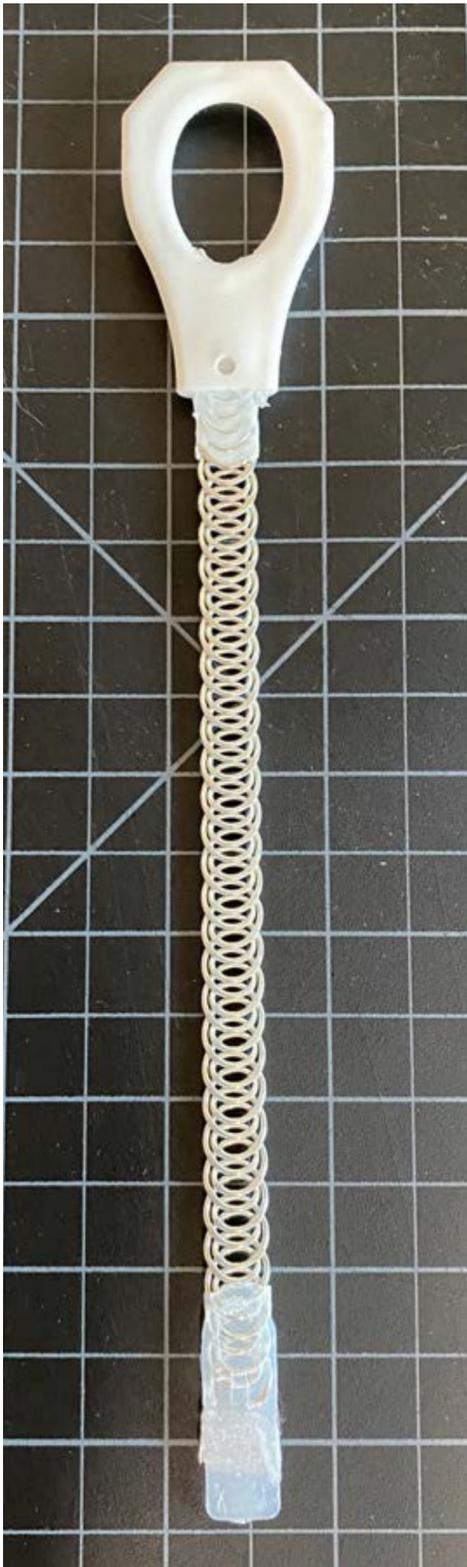
UNDERSTANDING THE CONSTRUCTION



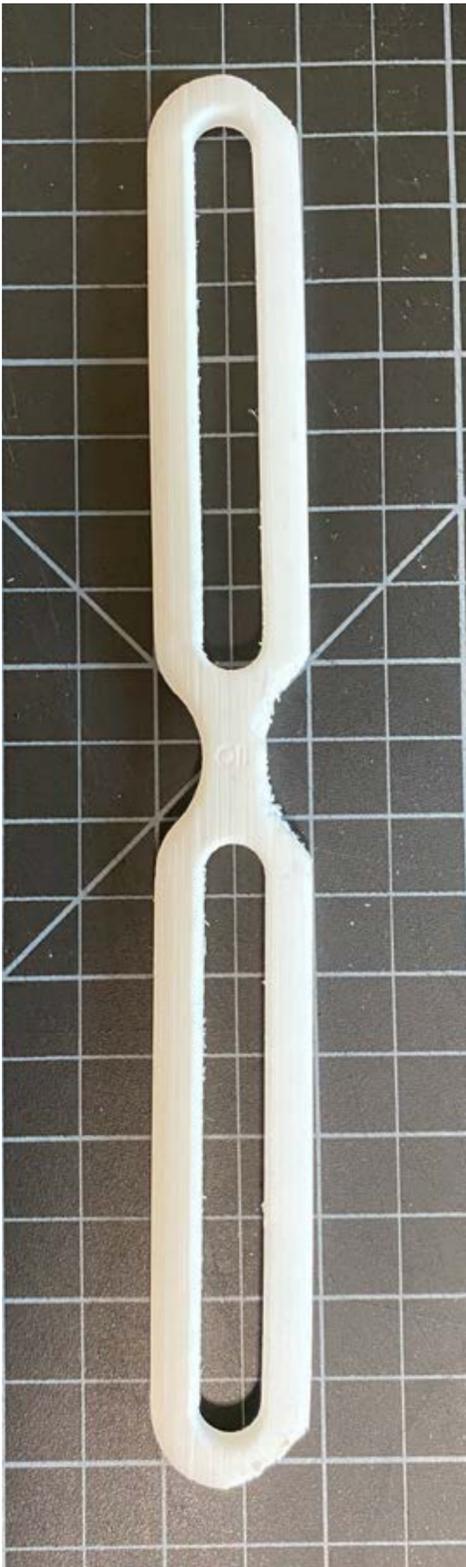
The one I bought used a metal spring with a silicone ring at the end. I want to replace it with a single material and still serving the same function. Single material is easier to recycle and more sustainable.

REDESIGN THE SIDE SUPPORT

Multi-parts with glue



Single material



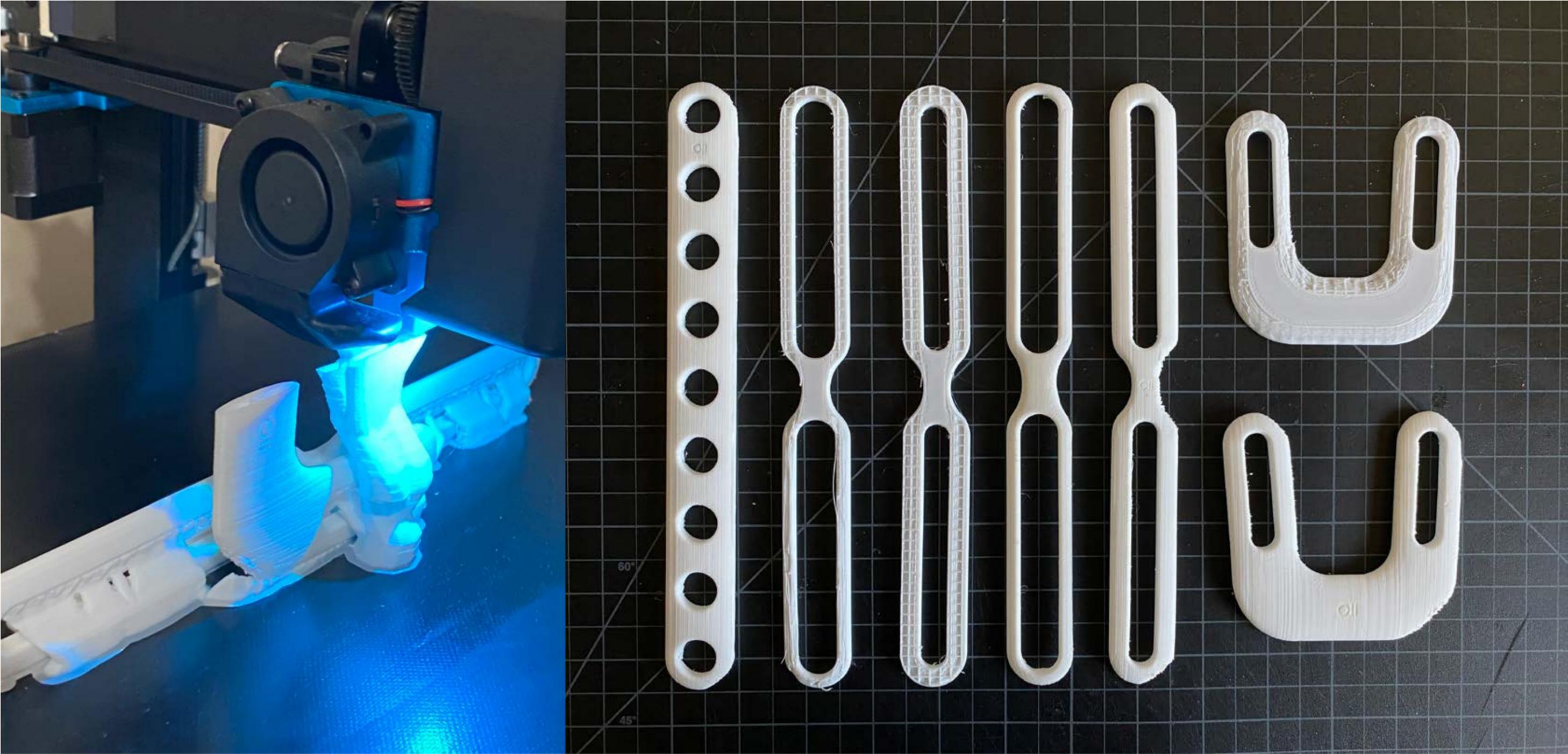
3D MODELING - VARIATION



Side support

Knee Stabilizer

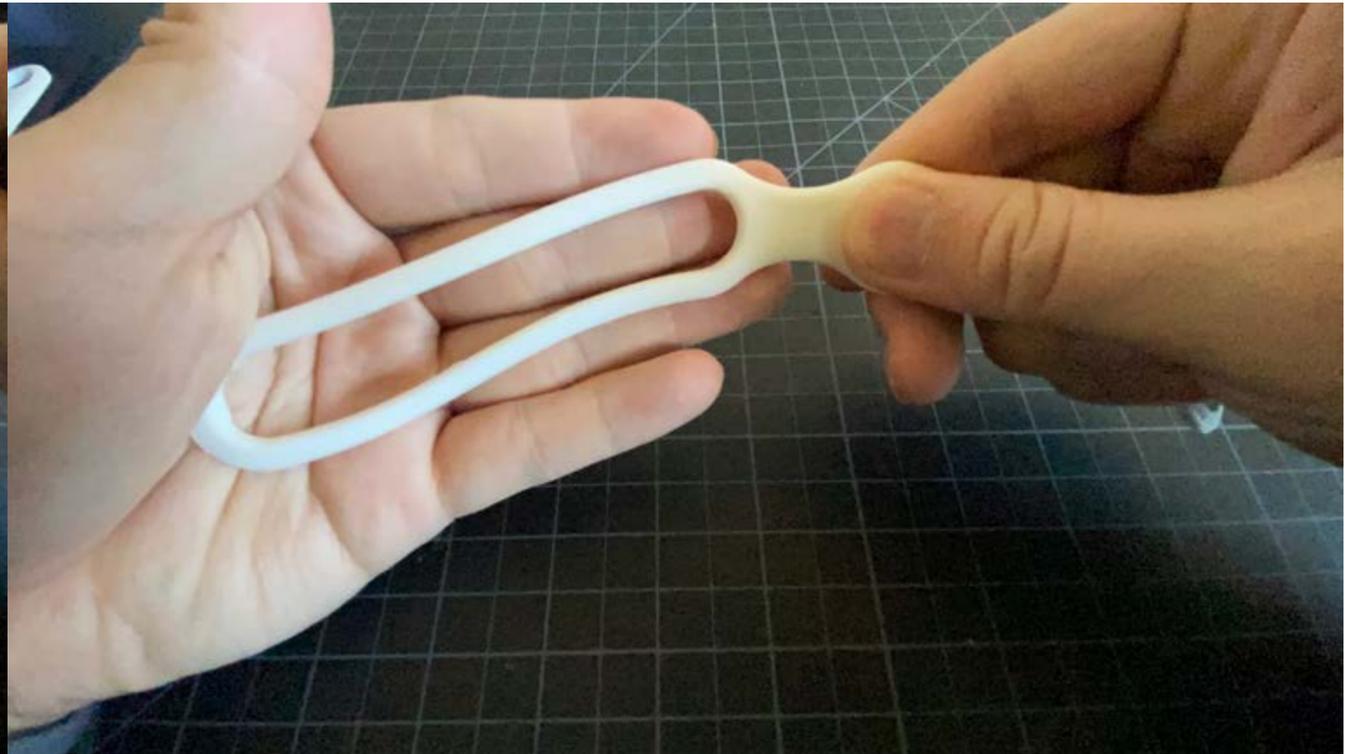
3D PRINTING - TPU



3D PRINT - TESTING



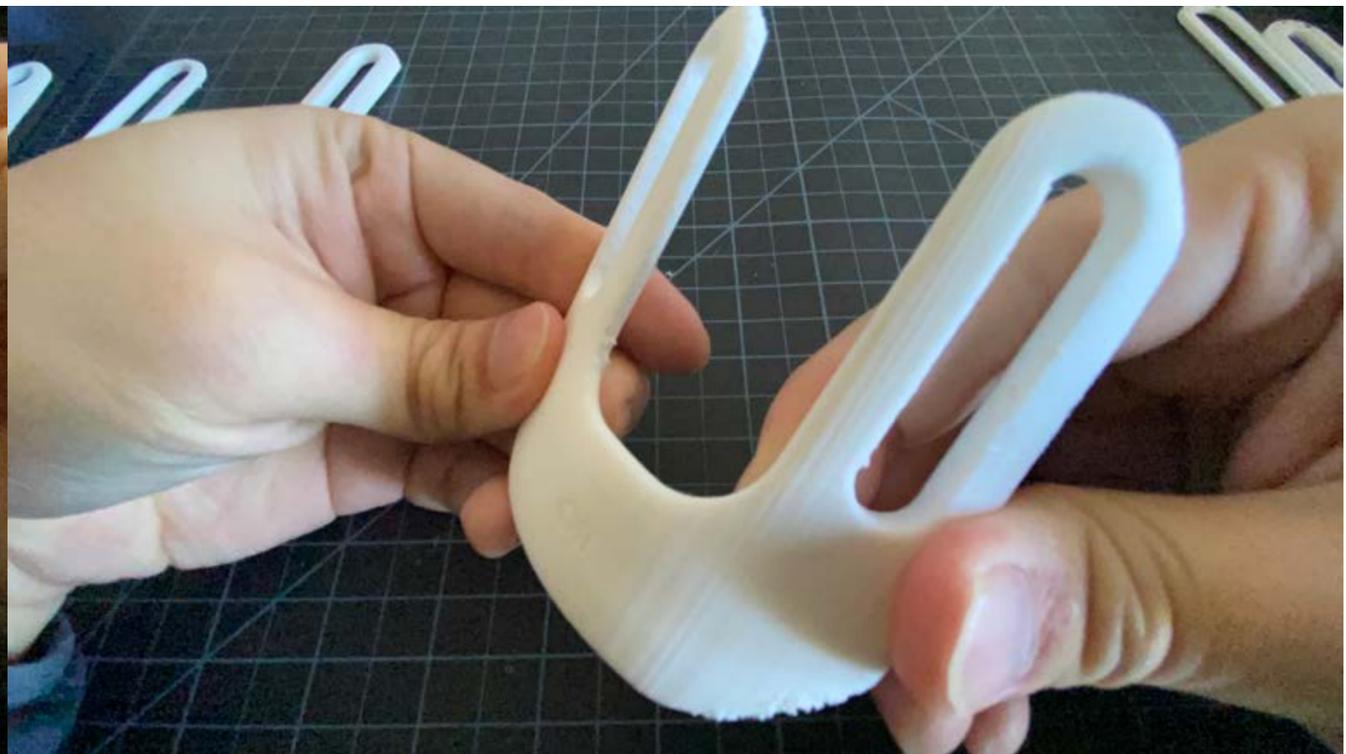
Not as flexible as I expect on the wide side, only flex in another direction.



Changed my design, but this one is too flimsy.



Added thickness to the side, now I'm satisfied



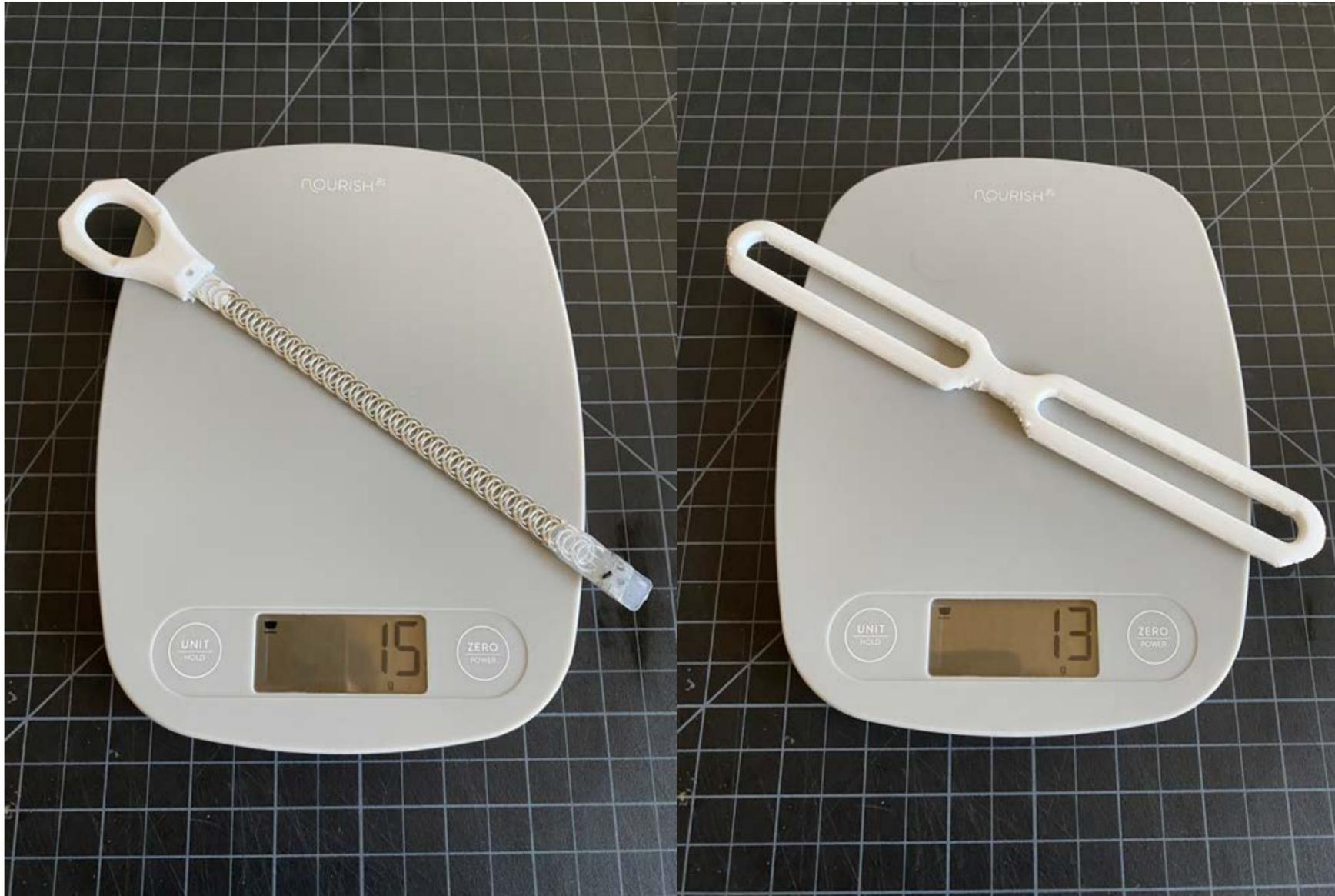
Knee stabilizer works well too.

SIDE SUPPORT ON BRACE



It has enough flexibility and provide a side support for the knee.

WEIGHT COMPARISON



My new side support weight less than the metal spring from the knee brace I studied earlier.

IDEATION SKETCH

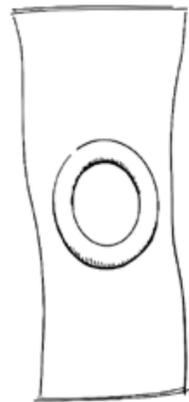
How to minimize
knee cap
side to side
movement?



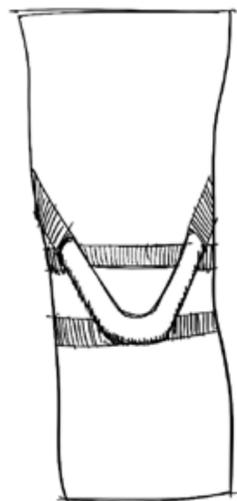
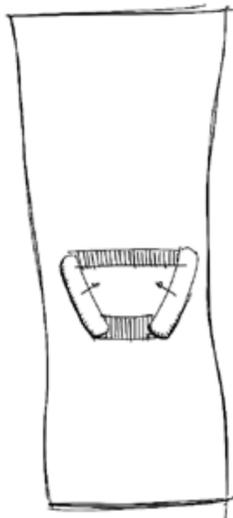
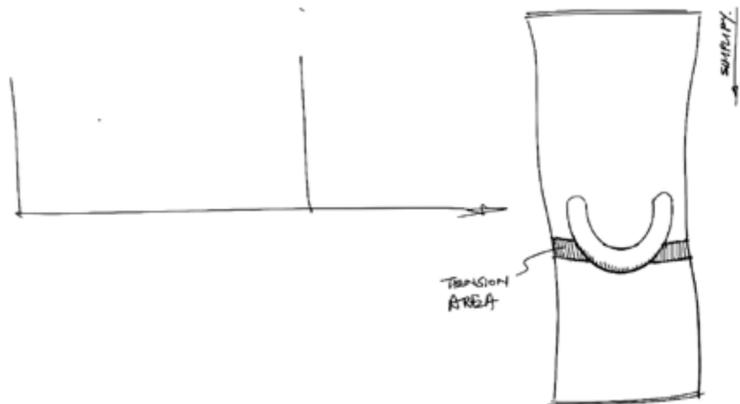
TENSION
TOPE



KNEE
SCRAP

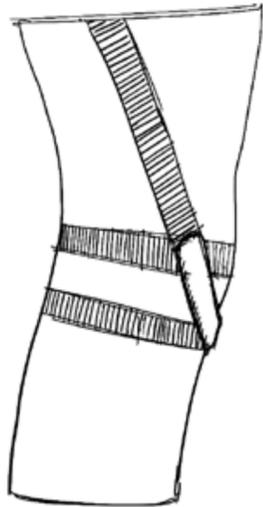


KNEE CAP
STABILIZER

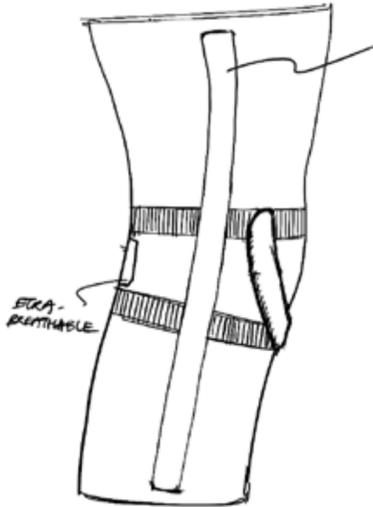


FRONT.

V-SHAPE



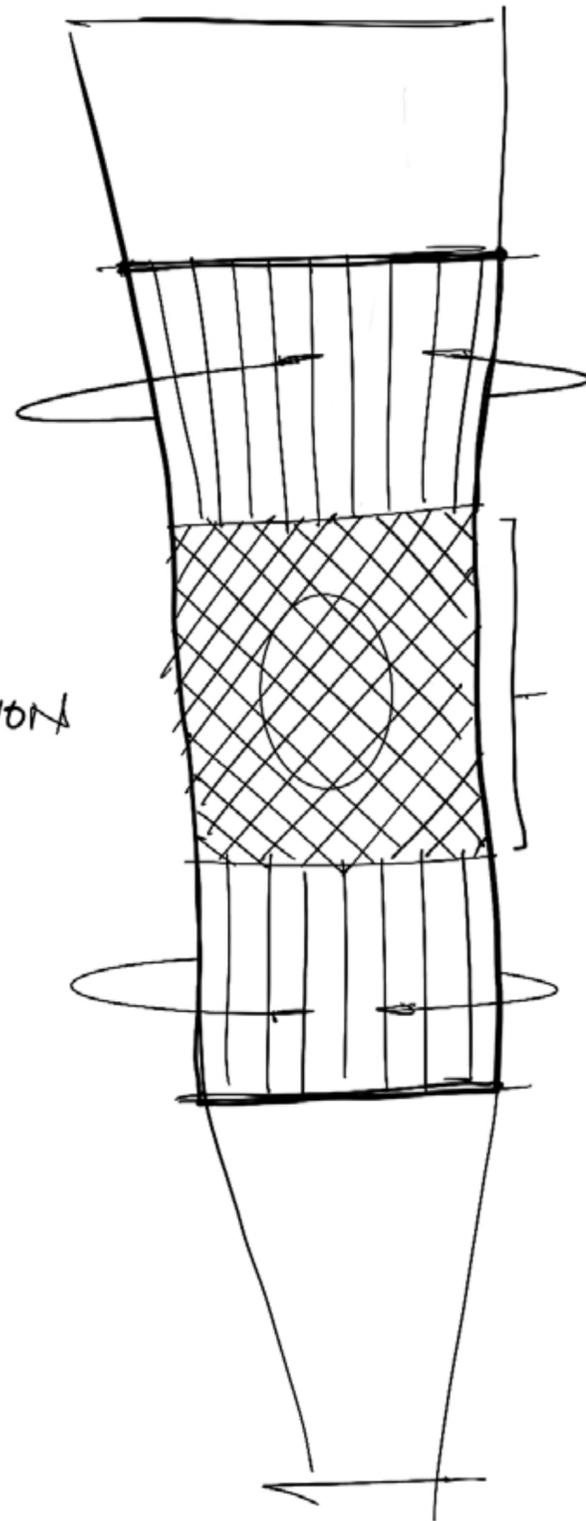
SIDE



FOUR-
DIRECTIONAL

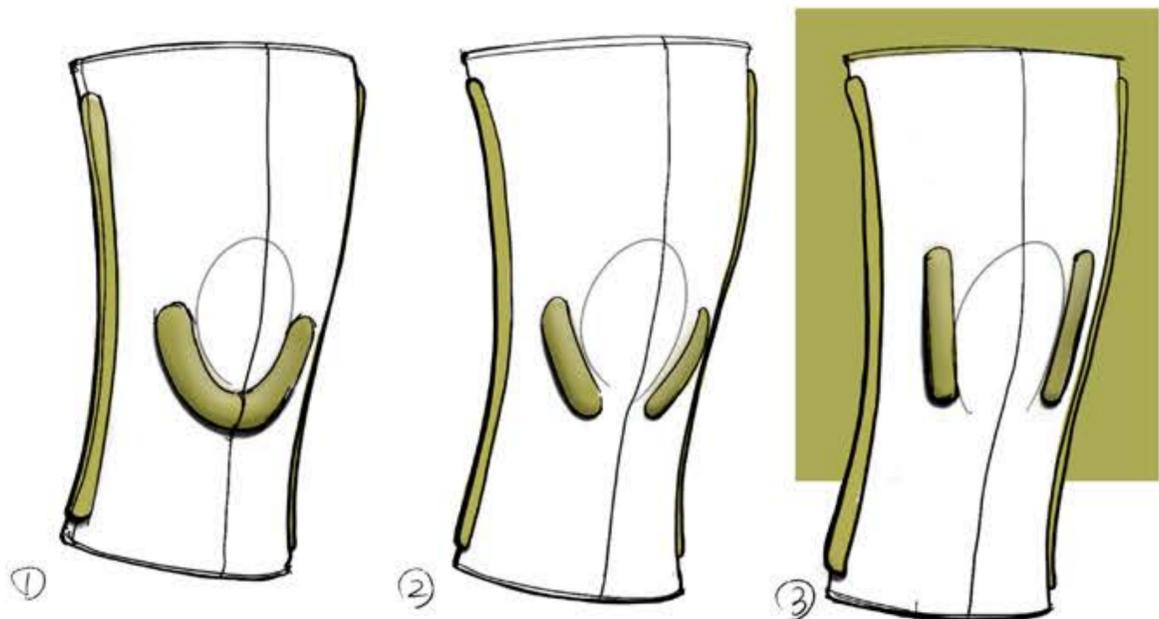
SIDE

COMPRESSION

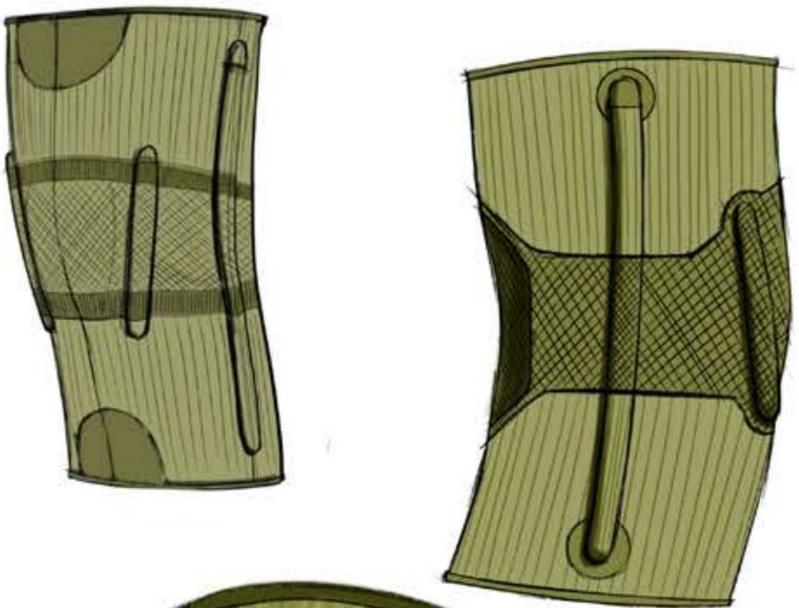
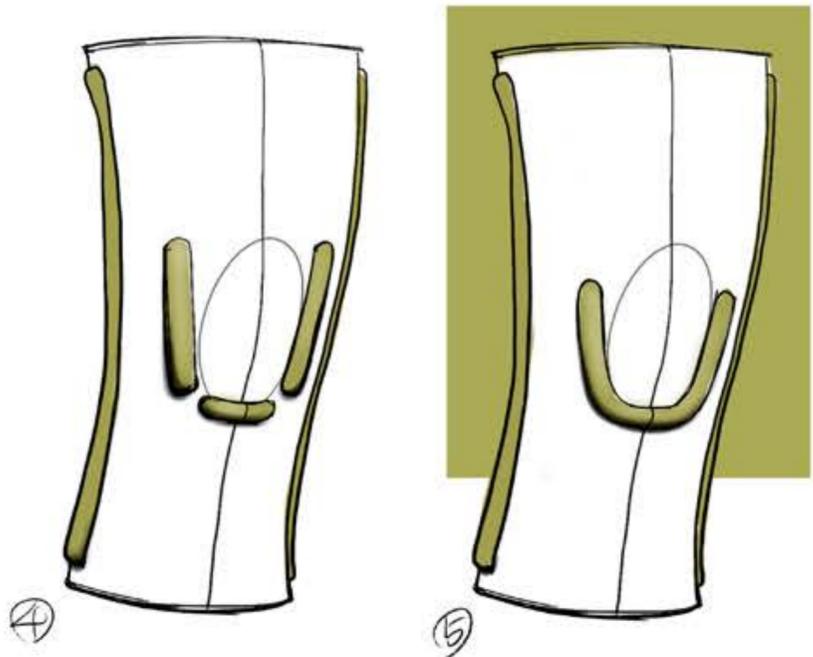


4-WAY

IDEATION SKETCH



2 PAD AT THE SIDE TO PREVENT KNEE CAP MOVING TO 2 SIDE.



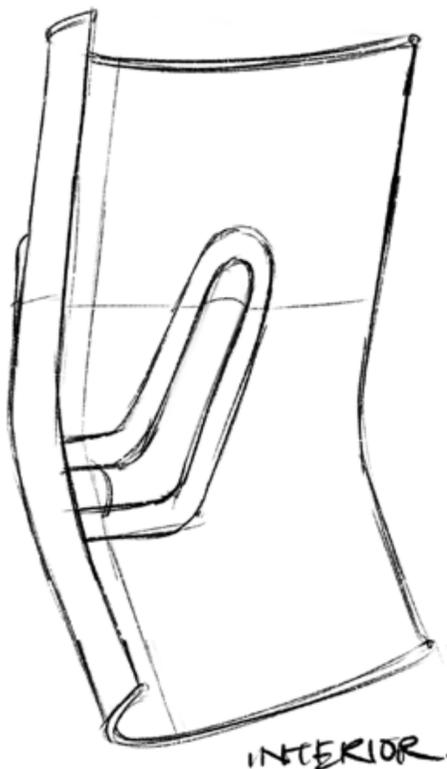
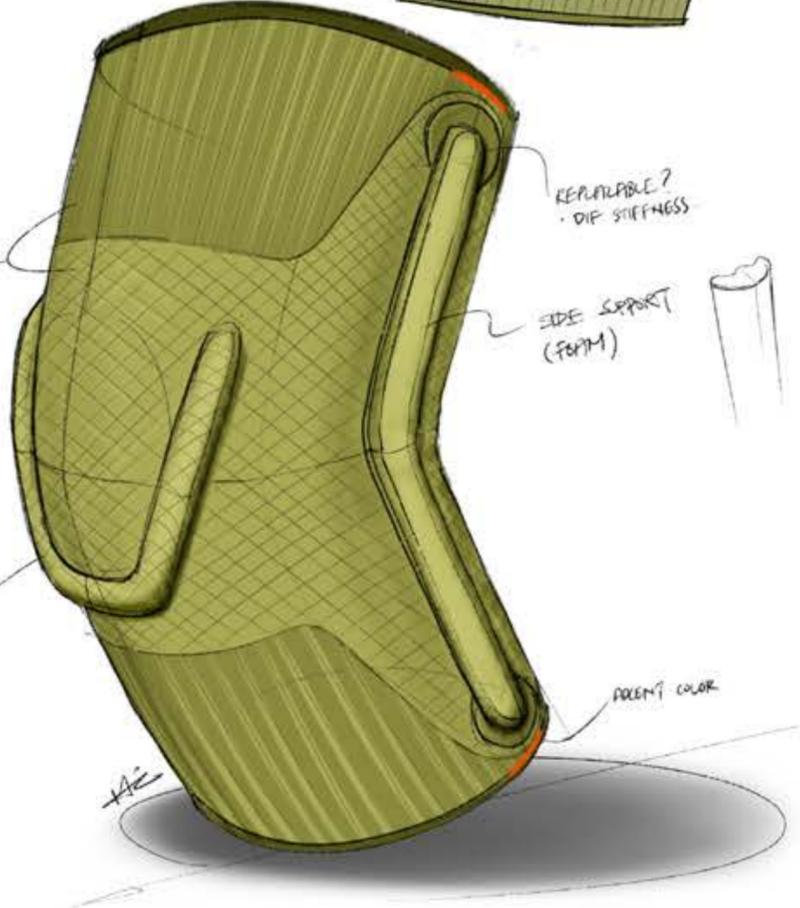
DIF TYPES OF KNIT. (COMPRESSION ENIT)

KNEE CAP PADDINGS
- PROTECTION
- STABILIZE (FORM)

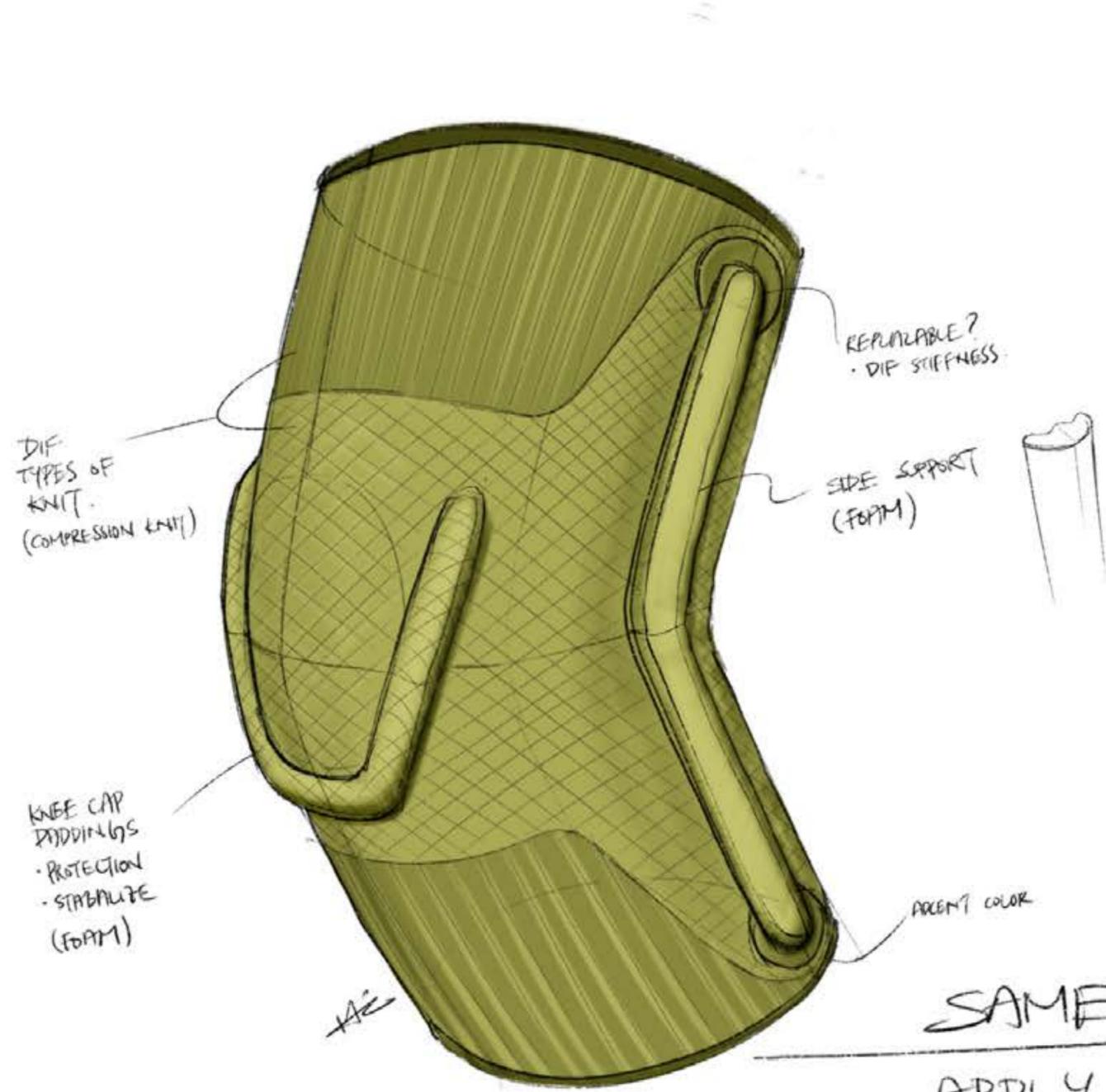
REPAIRABLE?
- DIF STIFFNESS

SIDE SUPPORT (FORM)

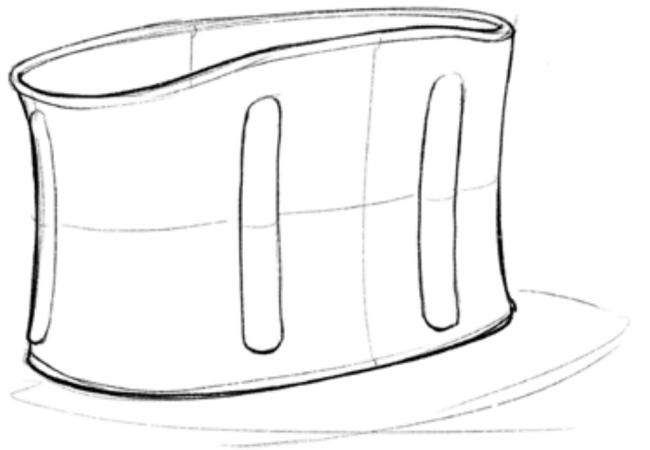
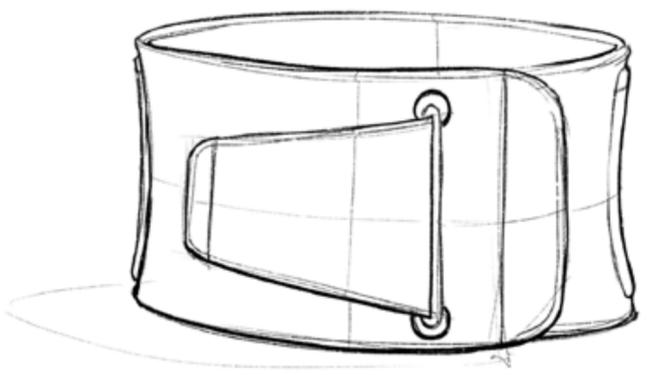
PREVENT COLOR



IDEATION SKETCH

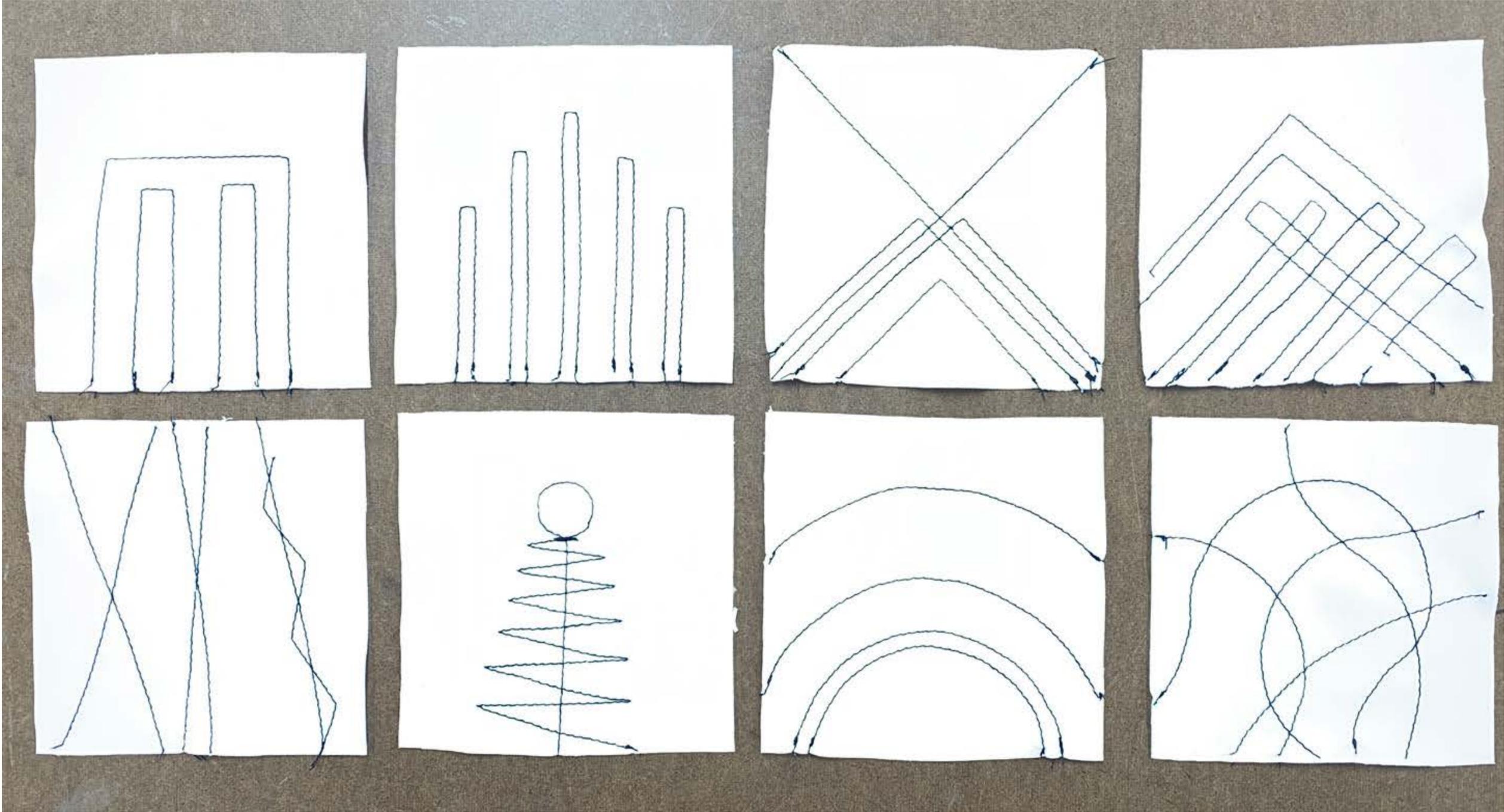


ETIC
IER PRODUCTS



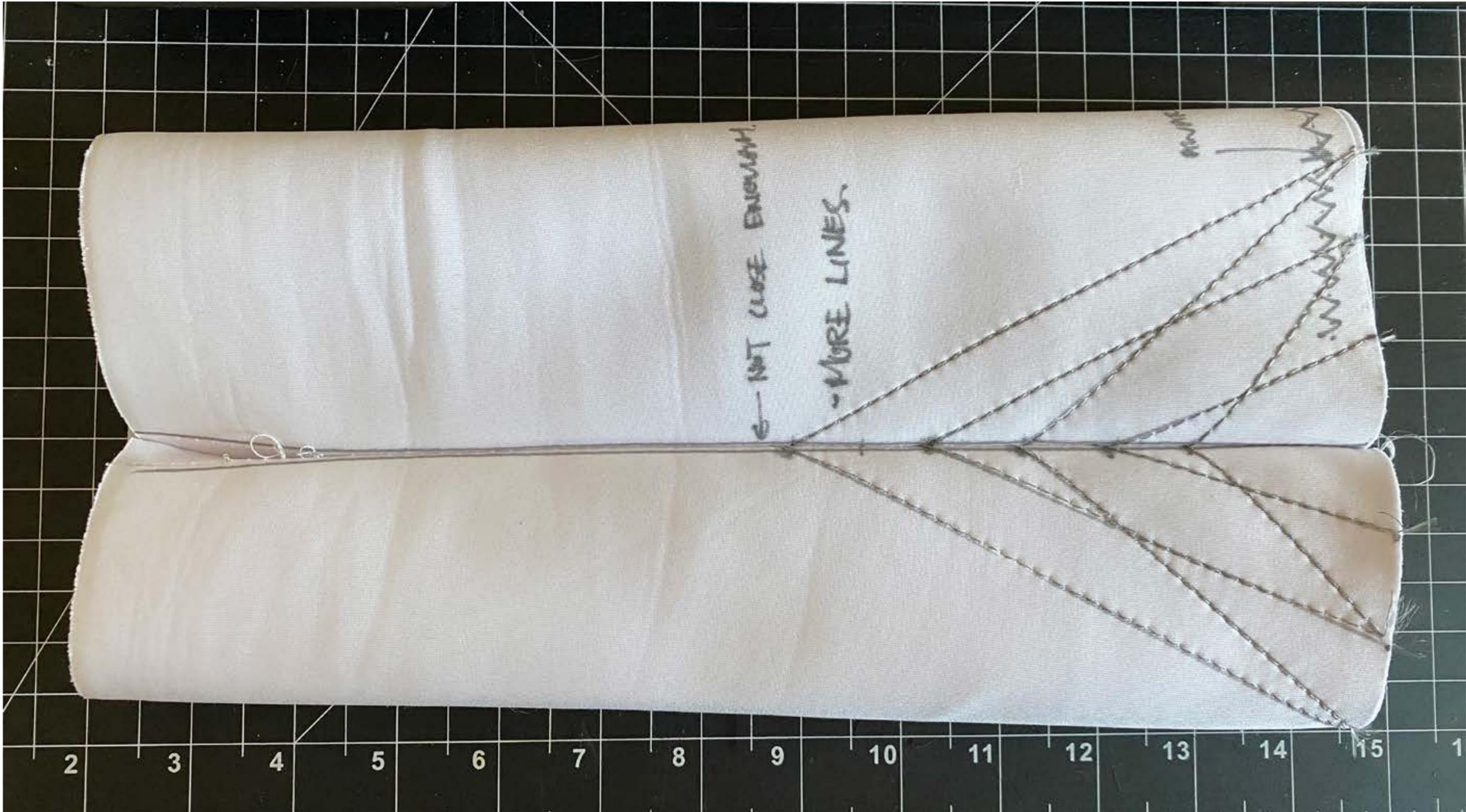
SAME AESTHETIC
APPLY TO OTHER PRODUCTS

DECORATION STITCHING - TESTING STRETCHNESS



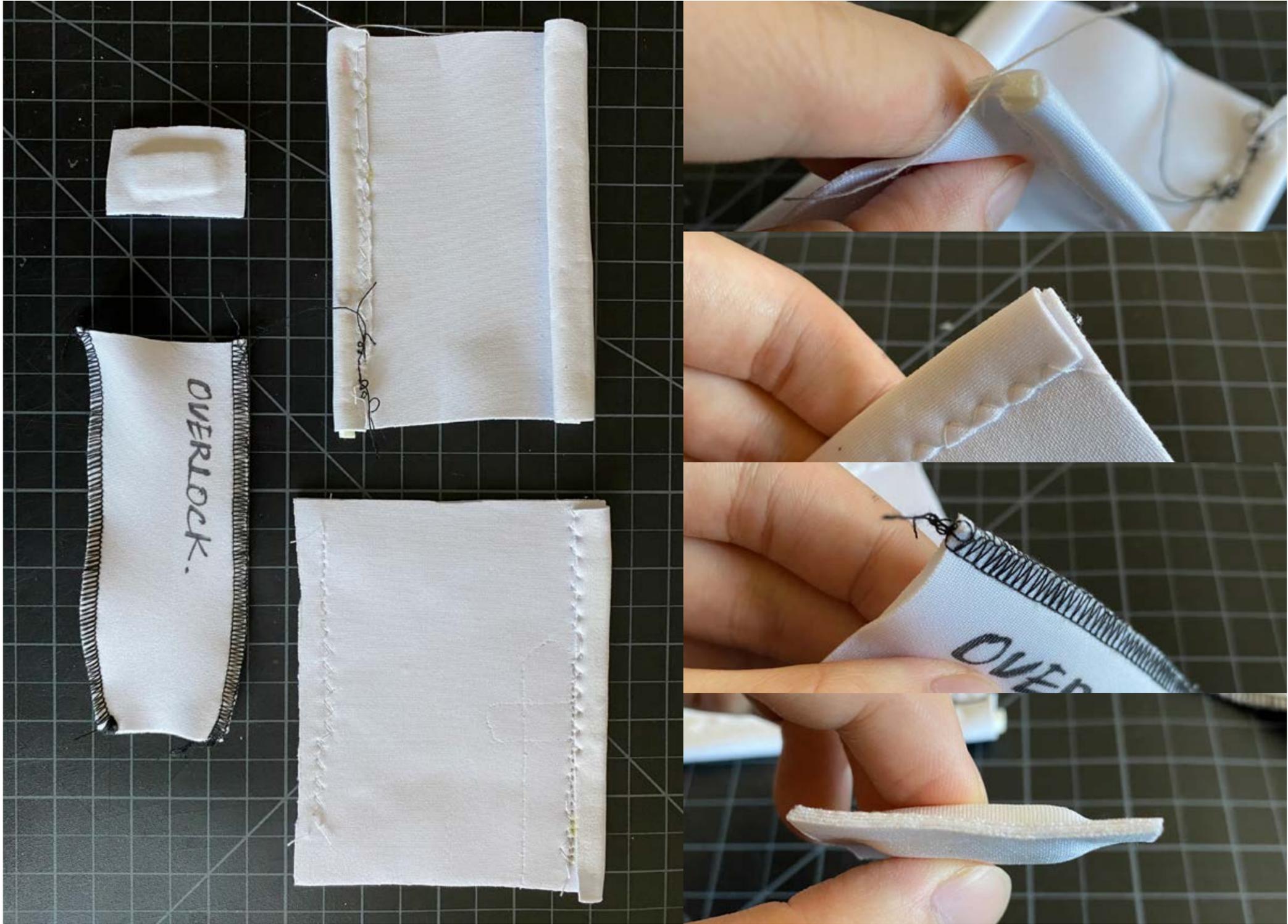
Trying different stitching pattern and found out the stitching not affect the stretchness much.

REFLECTIVE THREAD



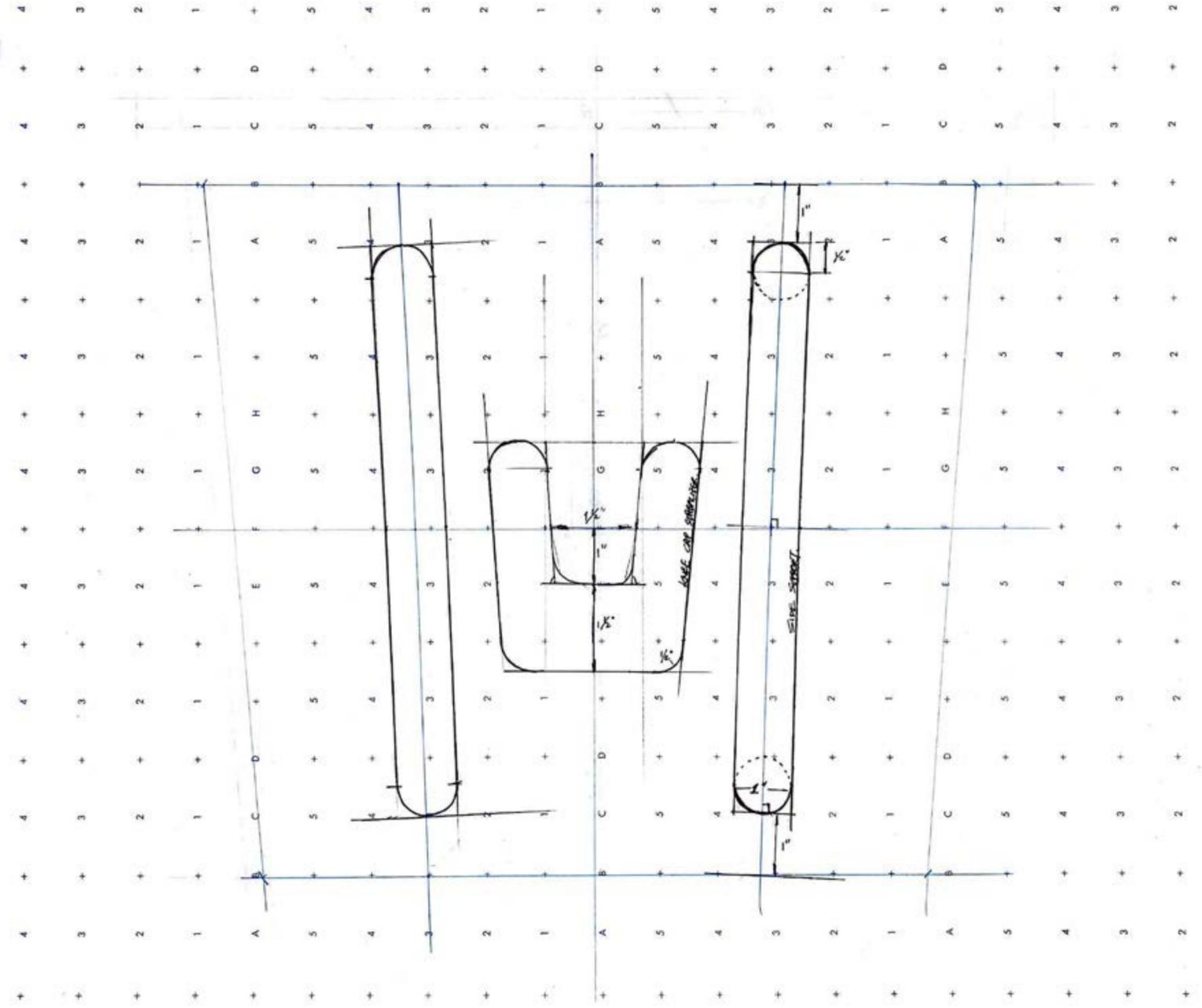
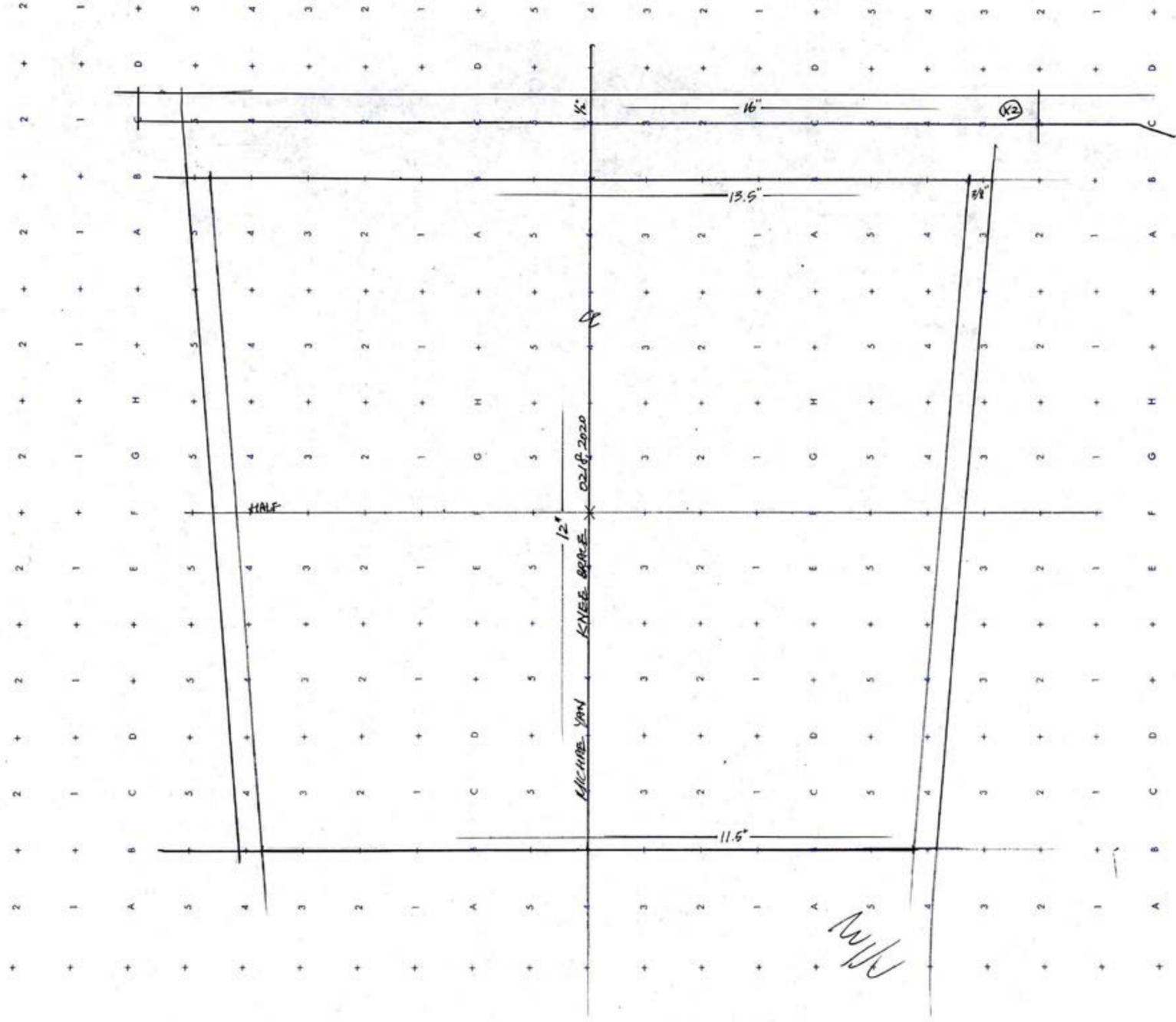
Since my sample pieces is not a engineered knit, which is seamless, my sample will have a seam. I need to stitch the reflective pattern seperately, then match them back when I close the seam.

SEAM TREATMENT

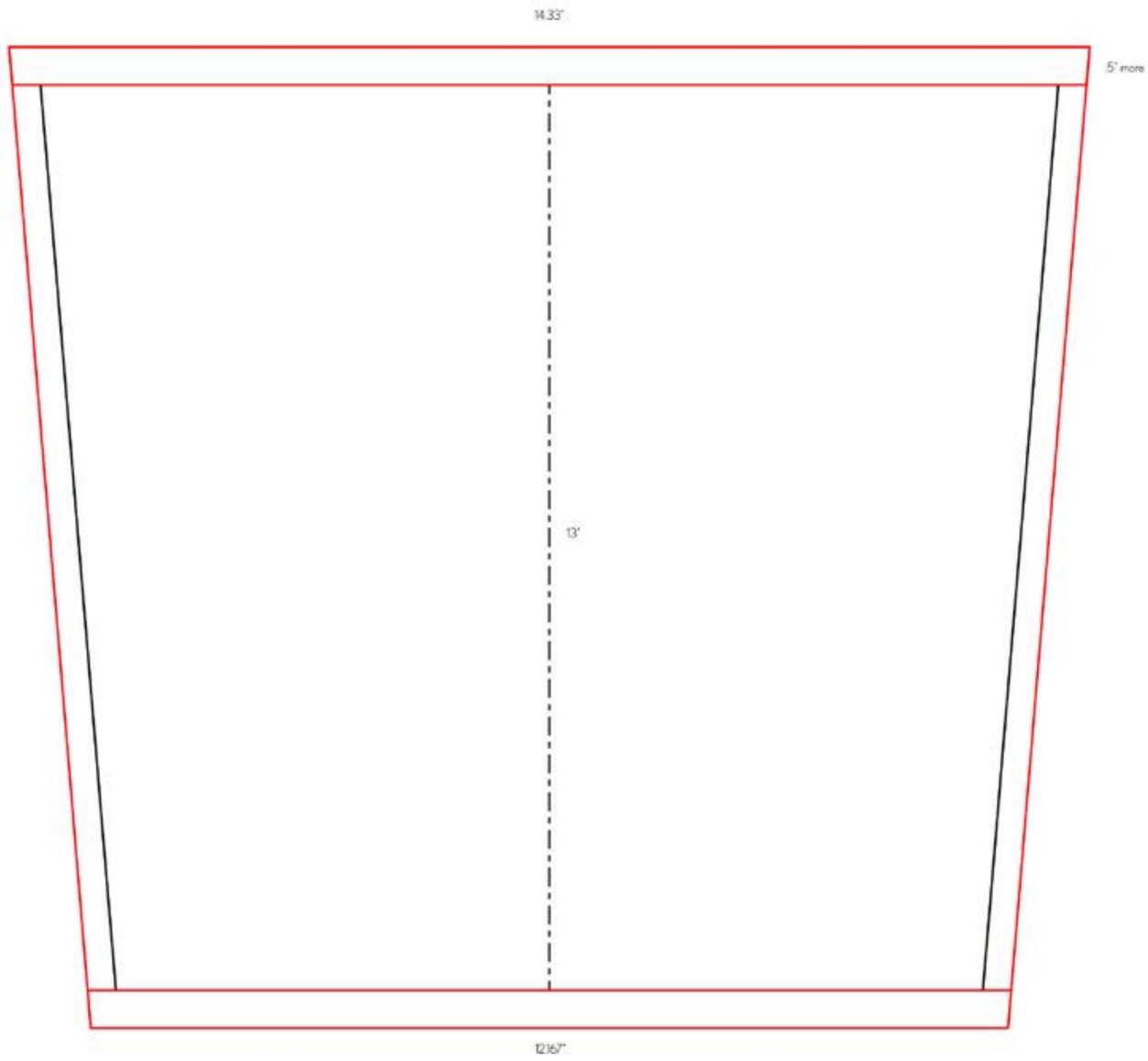


Trying different seam finishing.

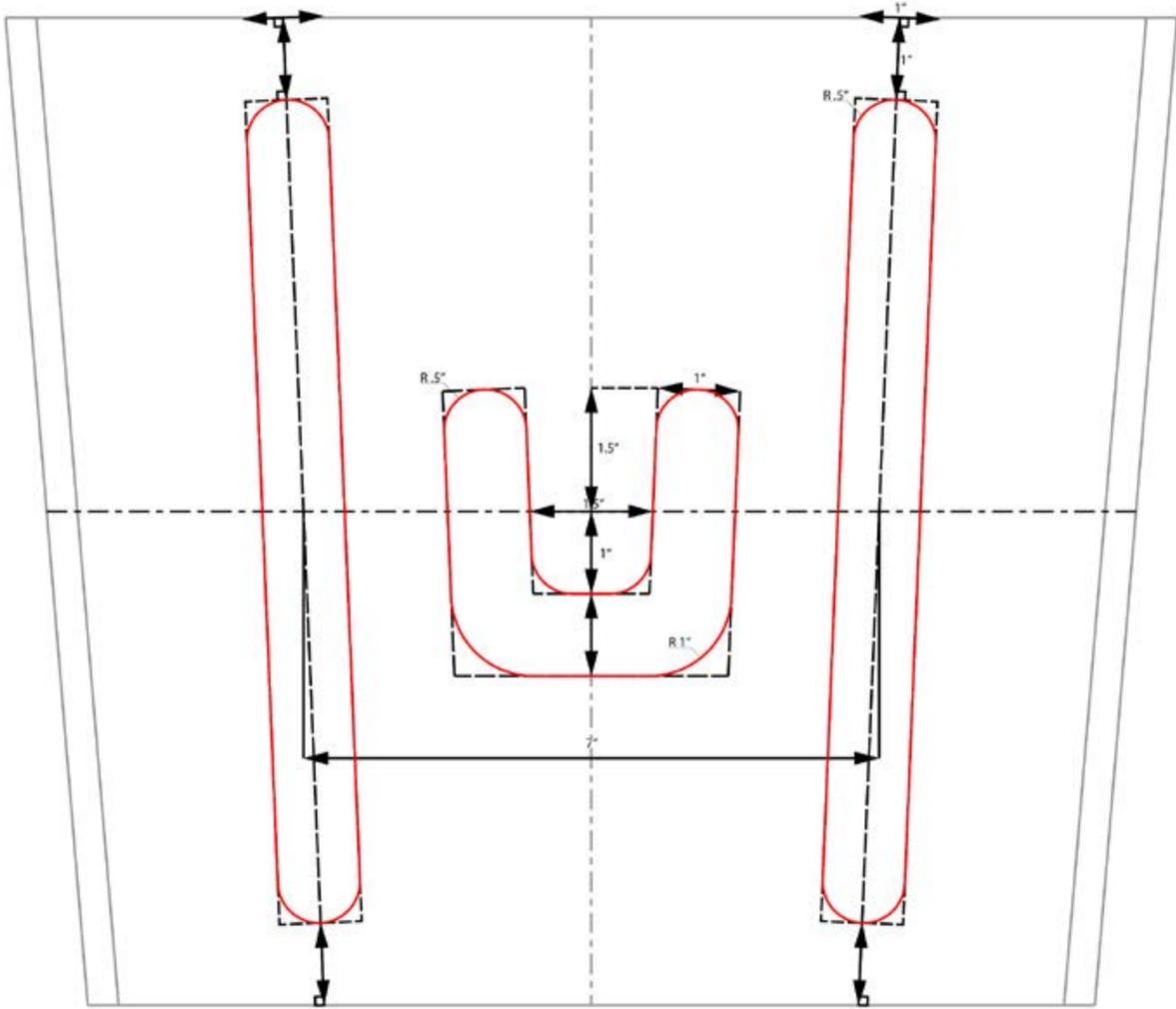
HAND DRAWN PATTERN



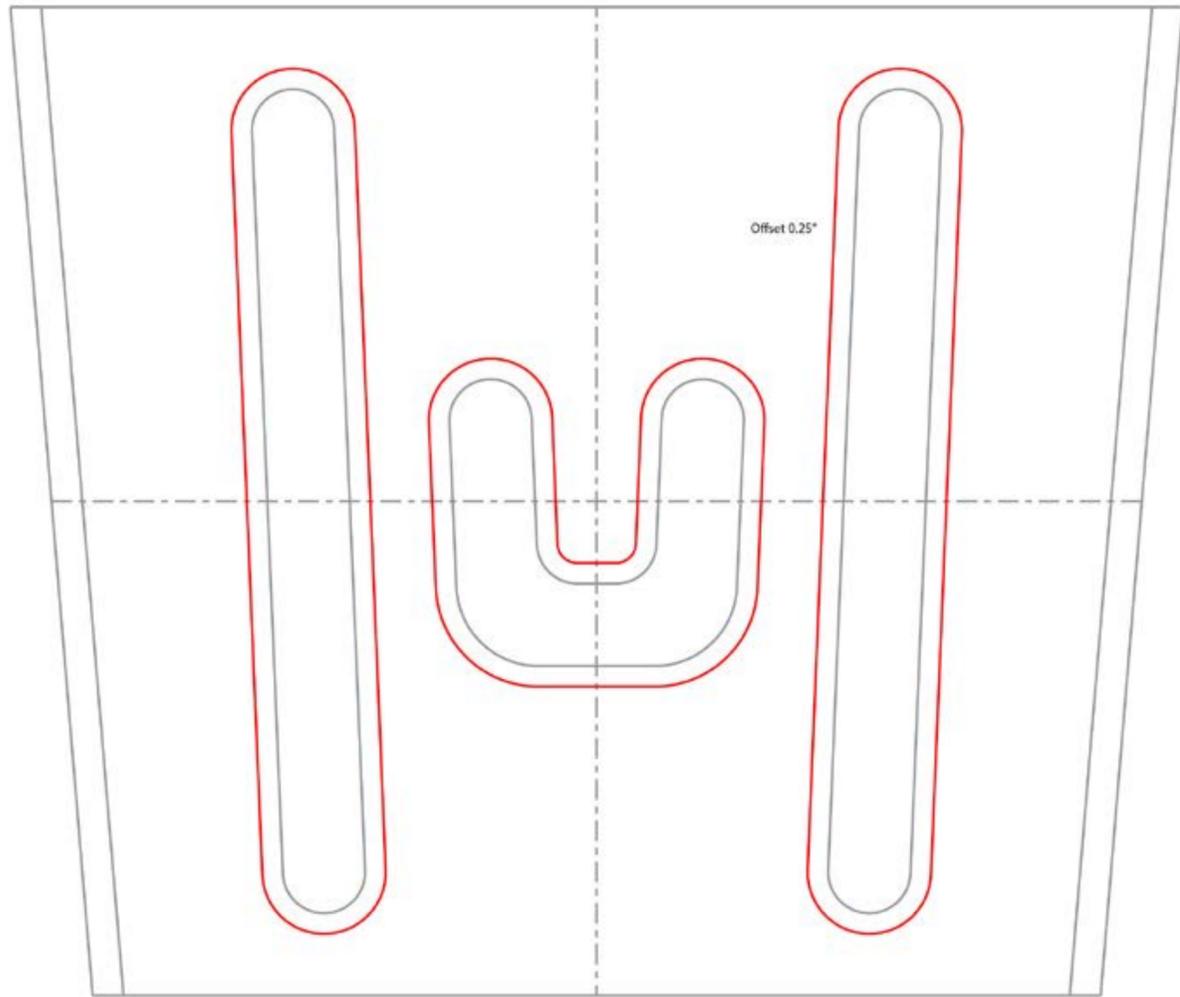
TOUCHUP IN ADOBE ILLUSTRATOR



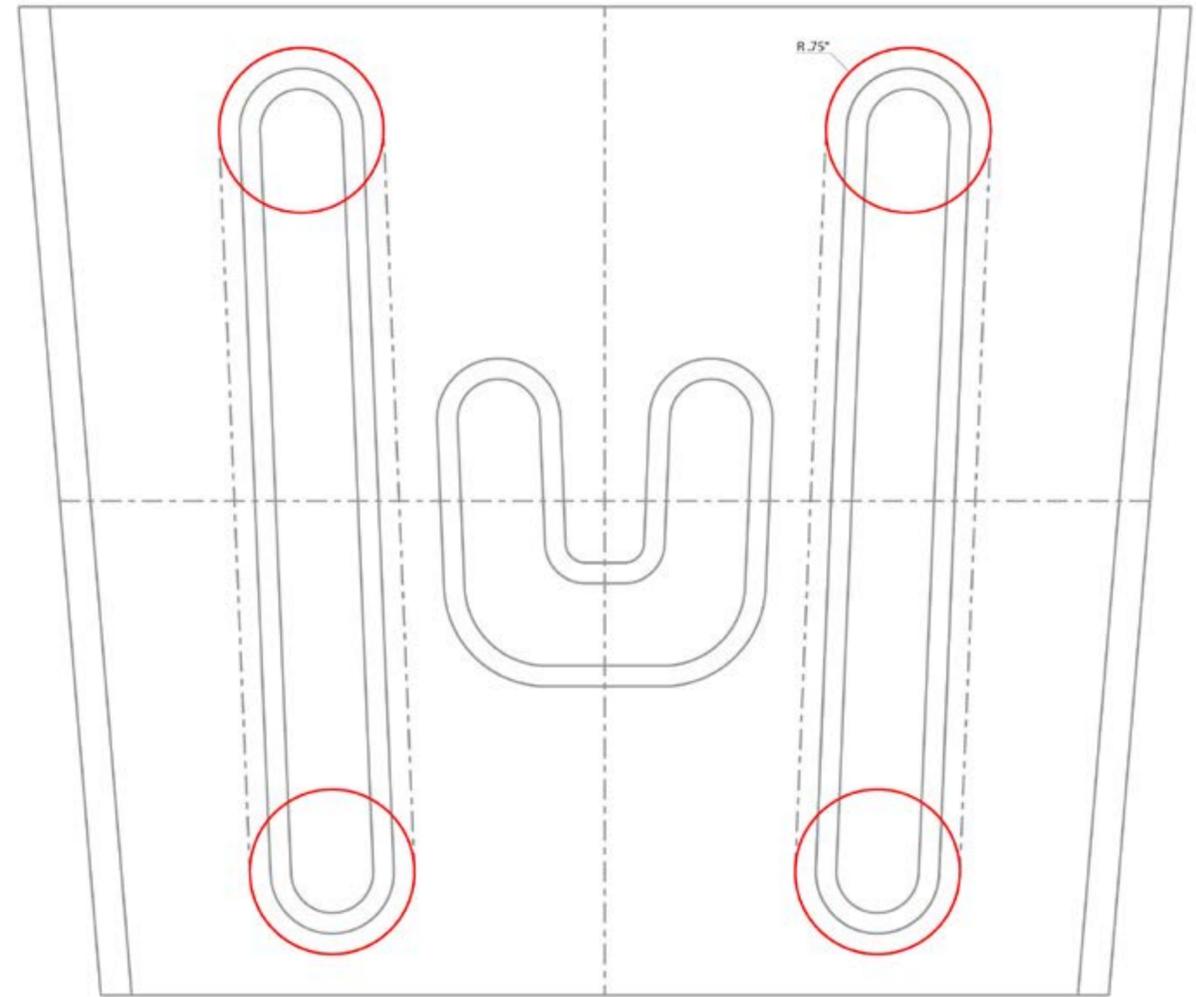
MAIN PIECE



PADDING



PADDING COVER + HEATBOND



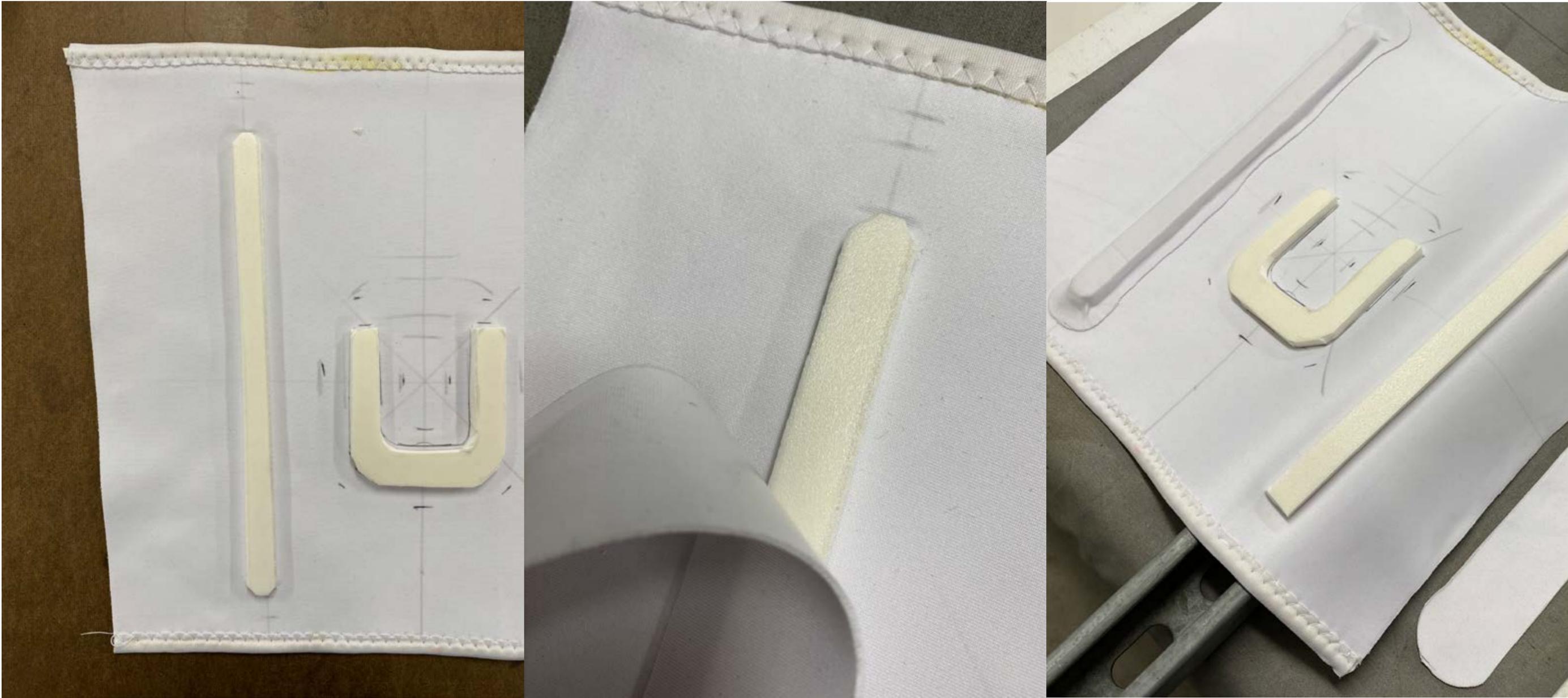
EXTERIOR AND INTERIOR DECO

CUTTING PATTERN WITH KONGSBERG



Cutting the pattern out with the Kongsberg cutting table.

MOCK UP FOR PLACEMENT



Using foam for the mock up to test the placement.

Using Heat n Bond to attach the back cover.

TAKE NOTES



FABRIC DYING STOVE TOP

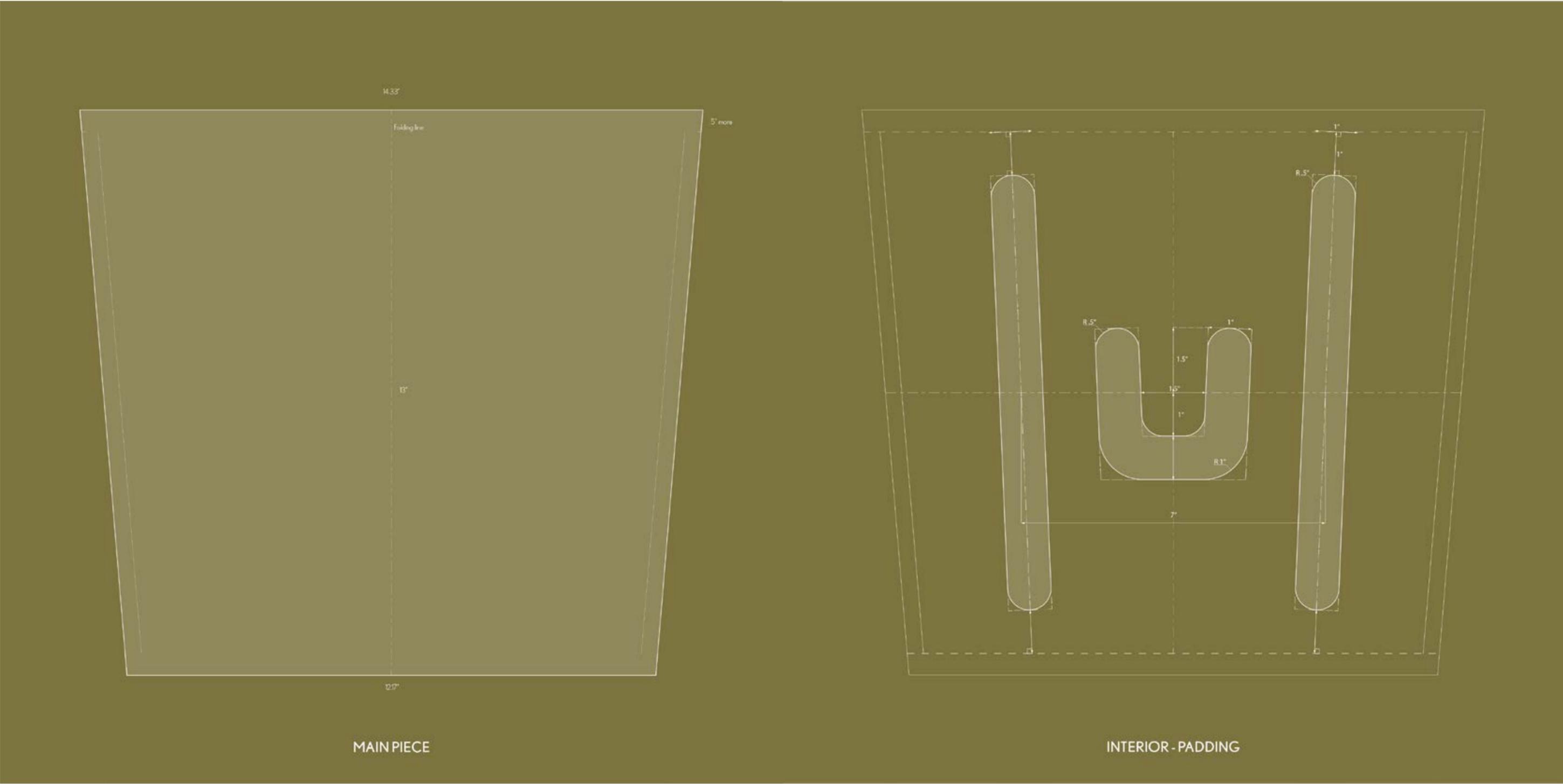


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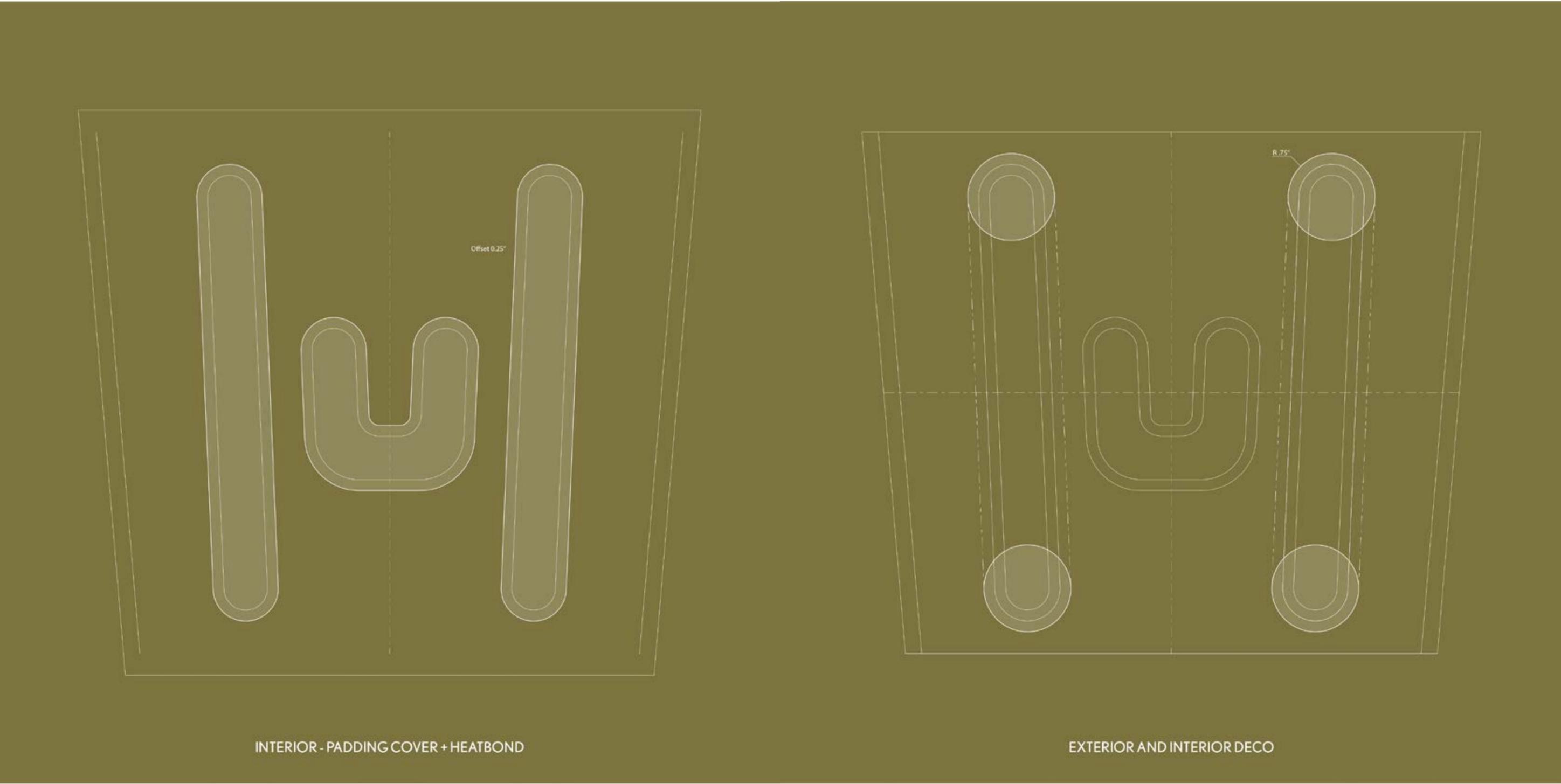
FABRIC DYING RESULT



FINAL PATTERN



FINAL PATTERN



FINAL PATTERN



FINAL LOOKBOOK

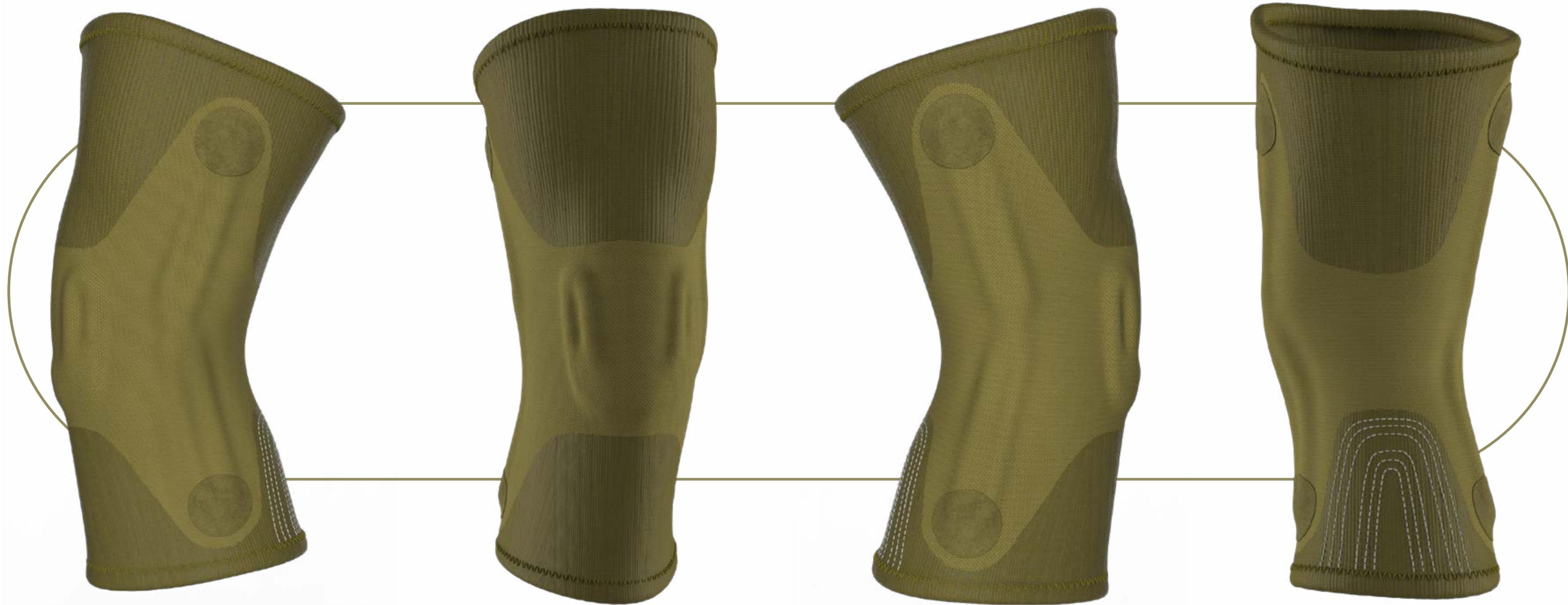
Final sample is replaced with 3D model due to the online class.

Oli



Oli



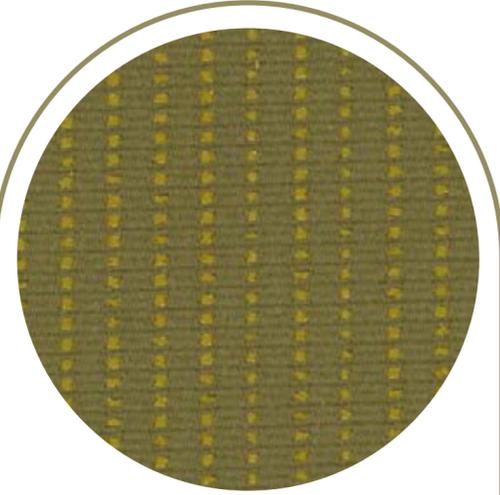


LEFT

FRONT

RIGHT

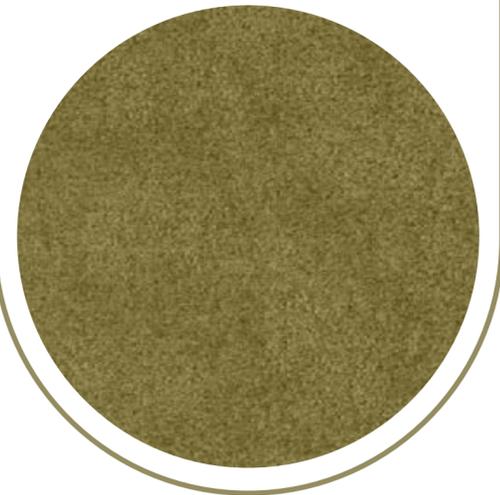
REAR



Strip pattern
Enginnered knit



4-way stretch
Enginnered knit



Alcantara



1



2

- 1 • Side support
- 2 • Knee stabilizer

Reflective thread for safety in darkness.

Foam piping for better grip.

Alcantara pull tap provide nice grip, comfort and light weight.

Zig-zag stitching allow the knee brace to remain strtchy.

DAY



NIGHT





Thank you

