

ASSIGNMENT 3A

AUTOMATE CAD/SKETCHUP IMPORTS/EXPORTS TO/FROM REVIT

AI TOOL NAME: BIM BRIDGE

PROBLEM: I HAVE BEEN FRUSTRATED MANY TIMES DEALING WITH FILE FORMATS USED BY OTHER CONSULTANTS/FIRMS WHO DO NOT USE REVIT.

I WOULD PREFER NOT WASTING MINUTES OR HOURS TRYING TO MAKE THE FILES COMPATIBLE WITH THEIR APPLICATION.

I WOULD LOVE TO AUTOMATE AND MAKE THE PROCESS FASTER BY CREATING AN APP THAT CAN IMPORT FILES INTO REVIT IN A WAY IT MATCHES OUR STANDARDS AND EXPORT FILES FROM OUR REVIT MODEL INTO FILES THAT WOULD MATCH THEIR STANDARD OR STYLE FASTER WITH MINIMAL EFFORT.

I WOULD LOVE TO CREATE A SOFTWARE OR AN AGENT THAT ASSISTS TO DO THAT.

WHILE I JUST TYPE EXPORT CAD AND PROVIDE THE NAME OF THE FIRM AND CONTINUE WORKING ON MY PROJECT, I WANT MY APP TO RUN THE PROMPT AND EXPORT IN THE BACKGROUND AND MAKE IT READY TO SEND WITH ALL THE NECESSARY PROJECT DETAILS LIKE NAME, NUMBER, DATE OF TRANSMISSION AND SO ON.

IT WILL SAVE TIME AND SYSTEMIZE THE IMPORT EXPORT PROCESS IN THE COMPANY.

BIM BRIDGE – FLOWCHART

1. USER INPUTS

NATURAL LANGUAGE/COMMAND PROMPT

"EXPORT CAD – HKS – DD"
"IMPORT SKECTHUP 3D – HOUSE OF BOHN"
"PREPARE COORDINATION PACKAGE FOR FIRM X"

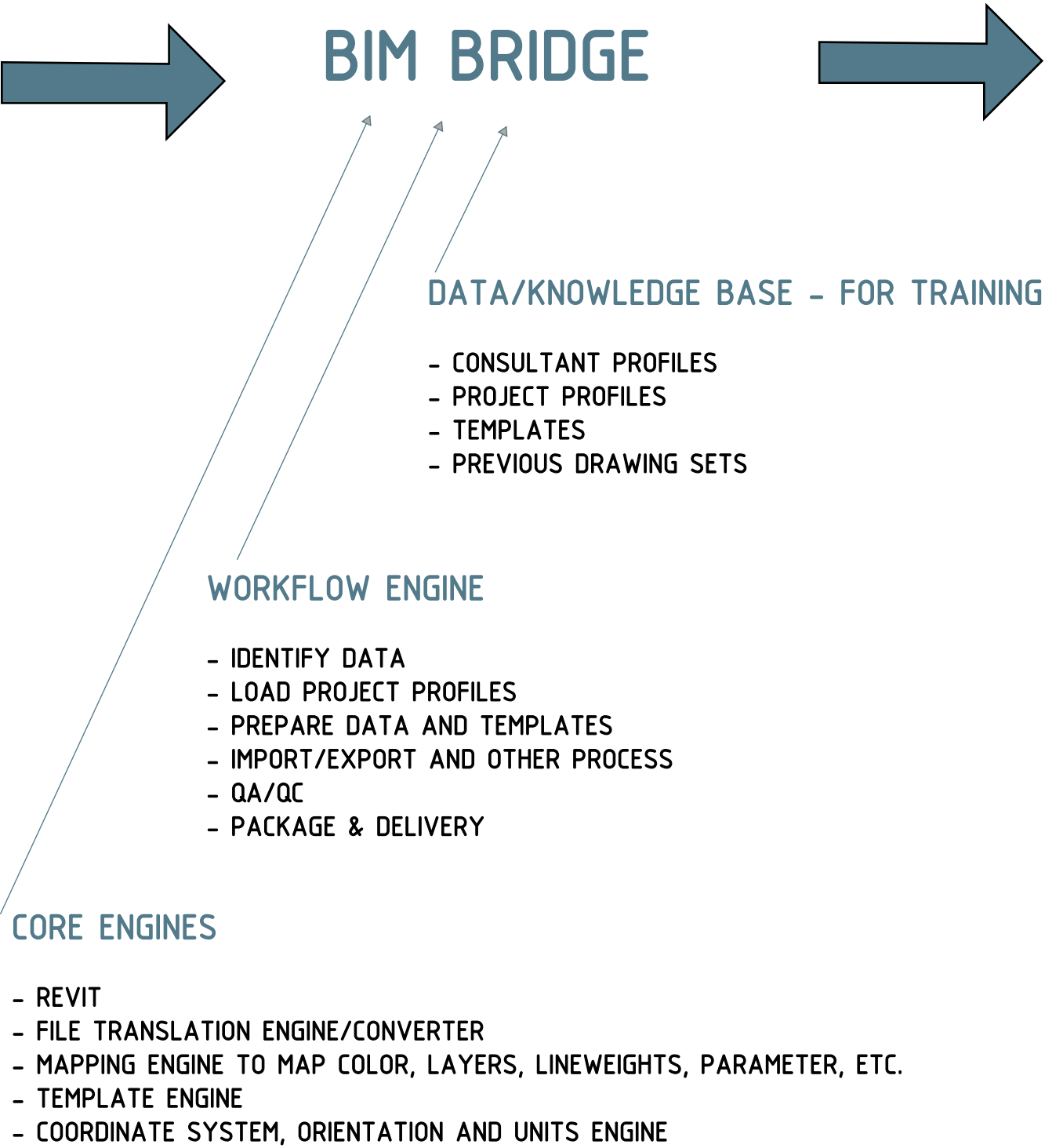
OR,

UI / REVIT ADD-IN PANEL

ACTION	EXPORT CAD ▼
CONSULATNT / FIRM	RIC DESIGNS ▼
DISCIPLINE	F&B ▼
PURPOSE	NEW UPDATES ▼
PHASE / ISSUE	DD/03 ▼
START	

2. AI TOOL/AGENT

UNDERSTANDS COMMAND AND PROCESSES



BIM BRIDGE

DATA/KNOWLEDGE BASE – FOR TRAINING

- CONSULTANT PROFILES
- PROJECT PROFILES
- TEMPLATES
- PREVIOUS DRAWING SETS

WORKFLOW ENGINE

- IDENTIFY DATA
- LOAD PROJECT PROFILES
- PREPARE DATA AND TEMPLATES
- IMPORT/EXPORT AND OTHER PROCESS
- QA/QC
- PACKAGE & DELIVERY

CORE ENGINES

- REVIT
- FILE TRANSLATION ENGINE/CONVERTER
- MAPPING ENGINE TO MAP COLOR, LAYERS, LINEWEIGHTS, PARAMETER, ETC.
- TEMPLATE ENGINE
- COORDINATE SYSTEM, ORIENTATION AND UNITS ENGINE

3. OUTPUTS

FILE PACKAGE

SAMPLE:
24.015_HKS_DD03/
├── DWG/
│ ├── A-101.dwg
│ ├── A-102.dwg
│ └── A-103.dwg
├── PDF/
├── TRANSMITTAL/
│ └── Transmittal.pdf
└── README/
 └── File_Notes.txt

TRANSMITTAL & DOCS

- TRANSMITTAL PDF
- COVER SHEET/TEMPLATE
- FILE LIST
- PROJECT INFO
- ISSUE LOG

REPORTS

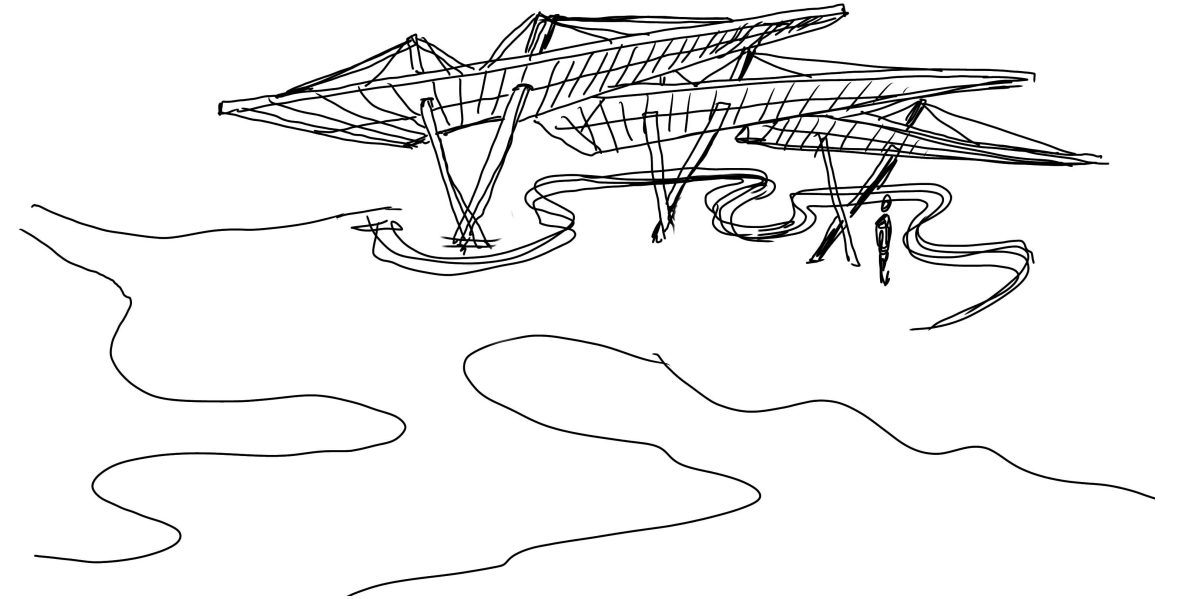
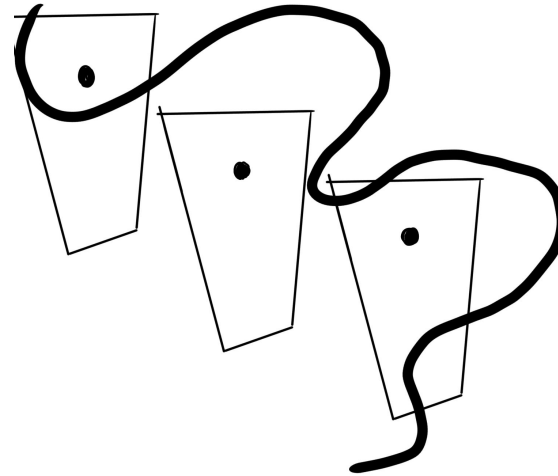
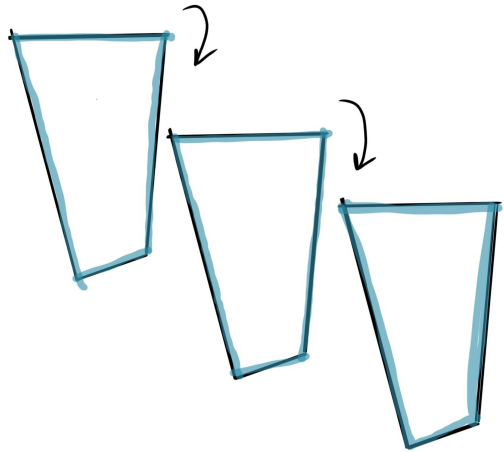
- QA/QC REPORT
- MISSING/EXTRA ITEMS
- STANDARD COMPLIANCE
- WARNINGS/ERRORS

DELIVERY METHODS OPTIONS

- LOCAL FOLDER/EMAIL/NEWFORMA/CLOUD

ASSIGNMENT 3B

'THE SHARDS' – A LAKESIDE PAVILION

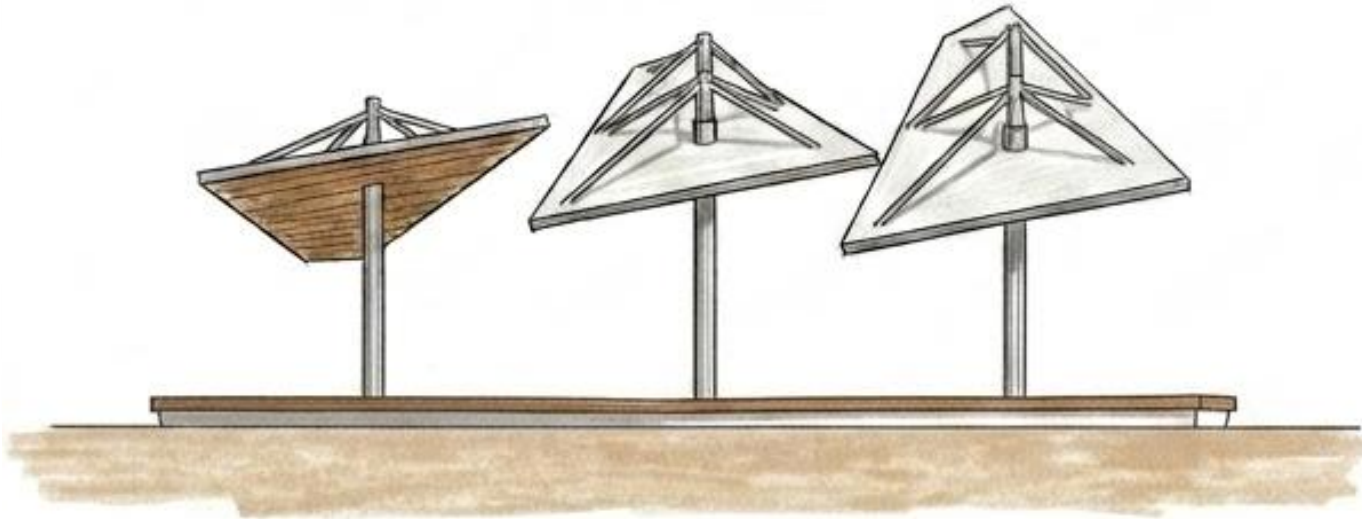


I USED GRASSHOPPER TO RECREATE THE ROOF FORMS I SKETCHED DURING MY PREVIOUS ASSIGNMENT.

THIS TIME, THE FOCUS WAS ON DEVELOPING A PARAMETRIC SCRIPT THAT PROVIDED GREATER CONTROL OVER THE ROOF GEOMETRY WHILE INTRODUCING A LOGICAL SYSTEM FOR THEIR ARRANGEMENT. TO ESTABLISH A COHESIVE DESIGN LANGUAGE, I USED THE SAME ROOF FOOTPRINT FOR THREE OF THESE FREESTANDING CANOPIES, ENSURING A CONSISTENT VISUAL IDENTITY.

I THEN TRANSFORMED EACH ROOF THROUGH VARIATIONS IN ORIENTATION AND INCLINATION, CREATING MORE DYNAMIC COMPOSITION. ALTHOUGH THE ROOFS SHARE THE SAME UNDERLYING FORM, THESE SUBTLE ADJUSTMENTS GENERATE VISUAL INTEREST AND CONTRIBUTE TO A MORE EXPRESSIVE AND ENGAGING PAVILION ROOFLINE.

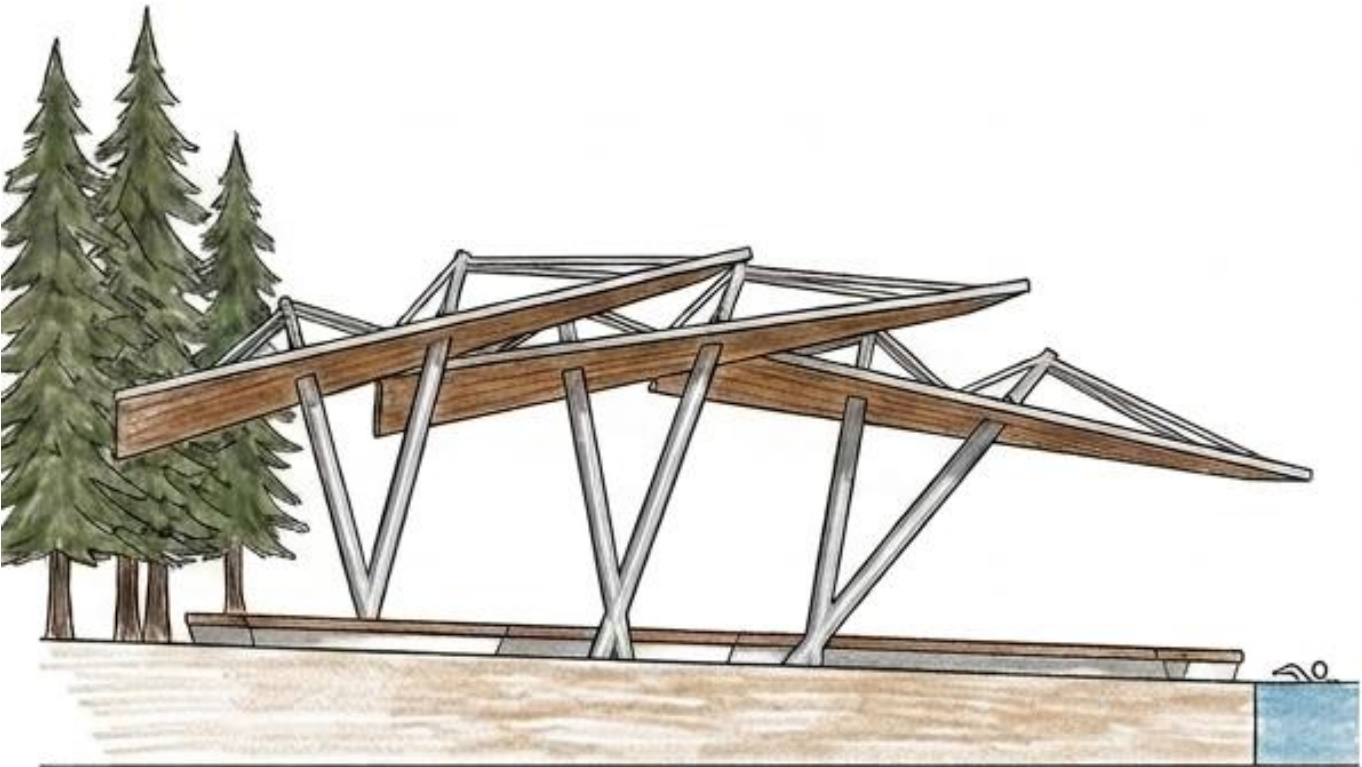
CONCEPT ELEVATIONS FOR REFERENCE



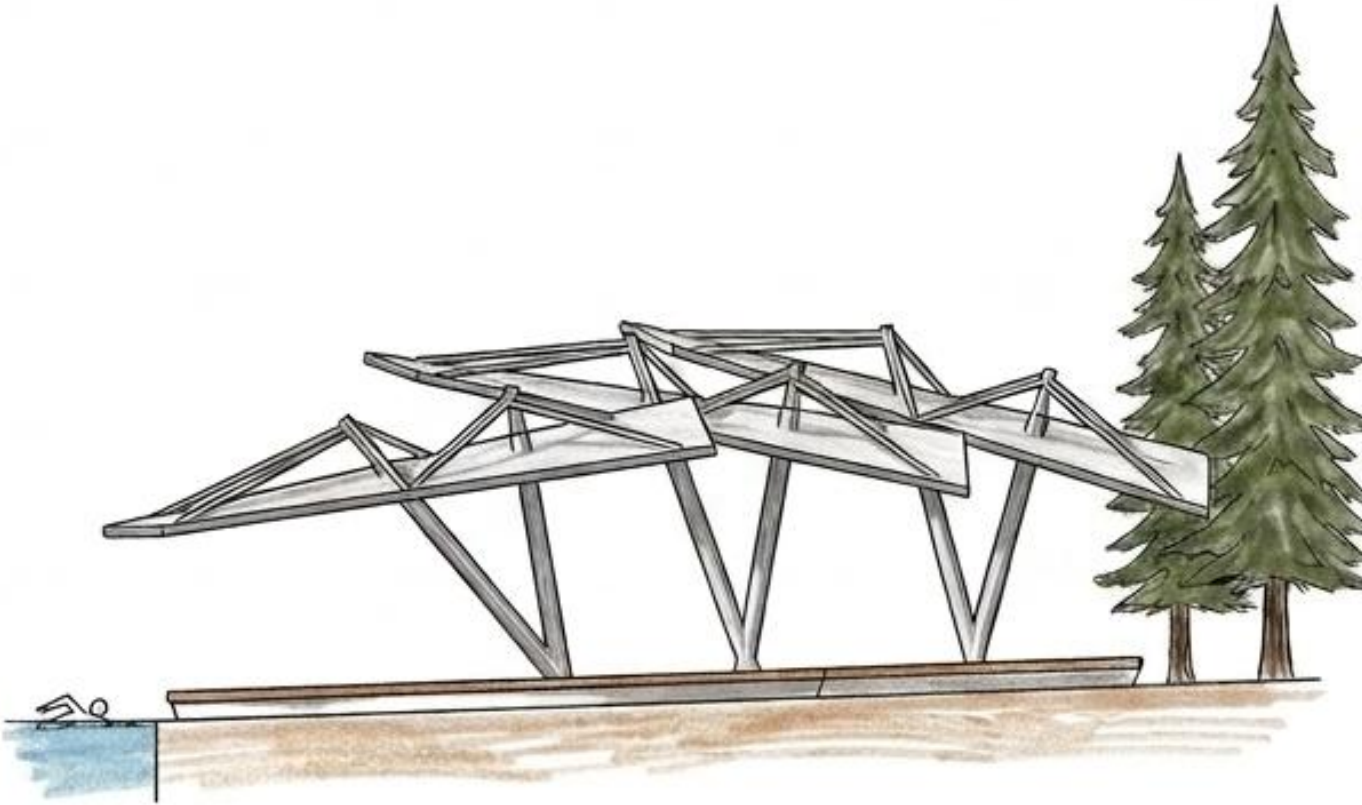
NORTH ELEVATION



SOUTH ELEVATION

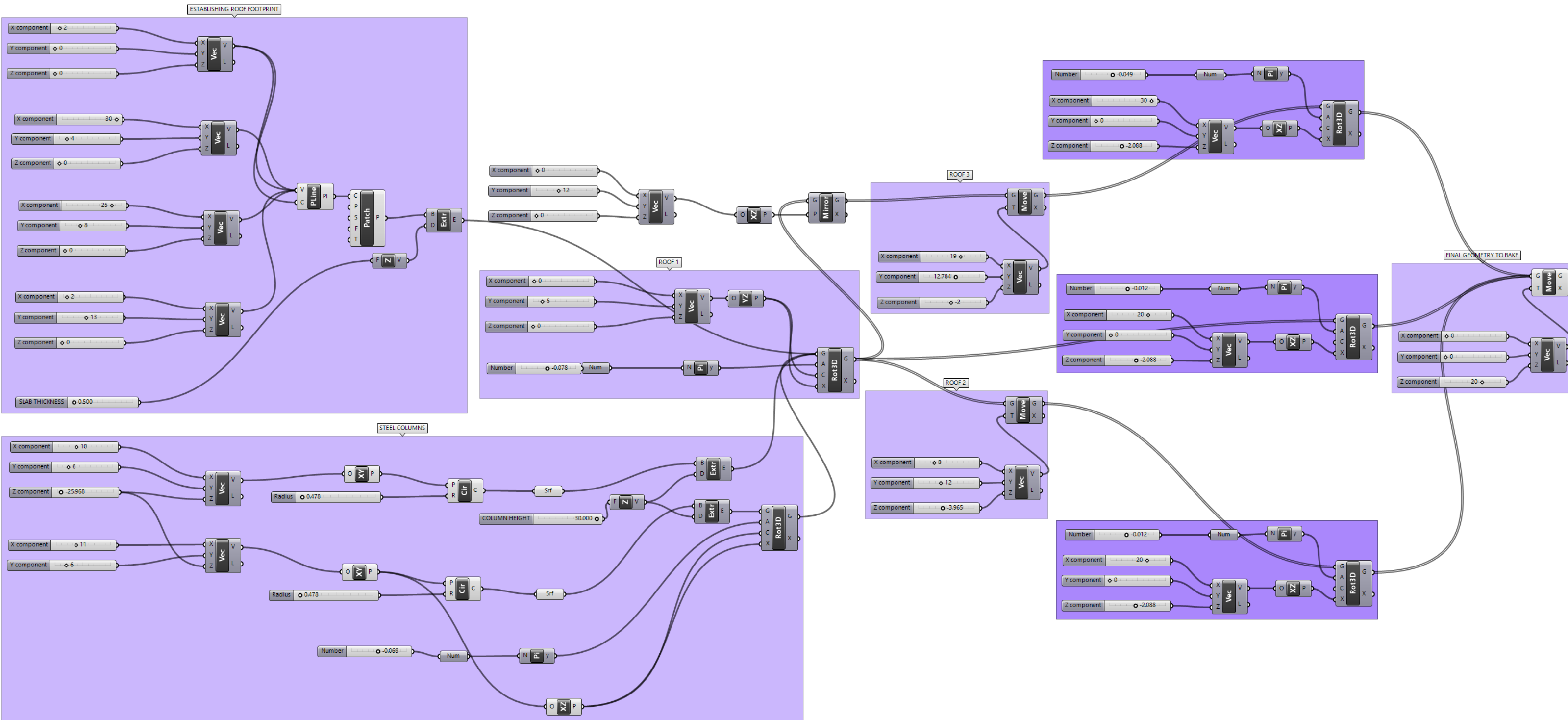


WEST ELEVATION



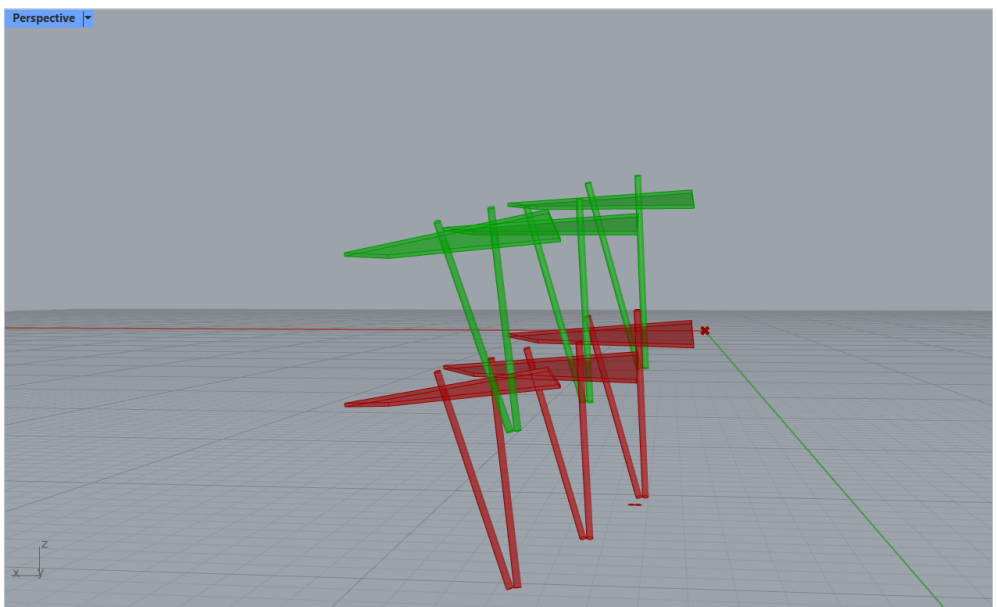
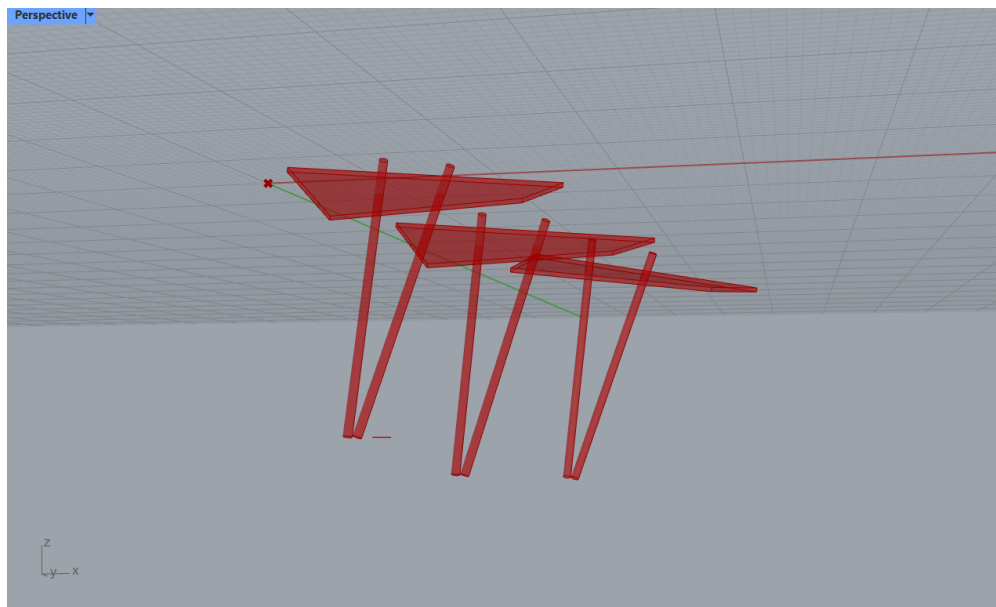
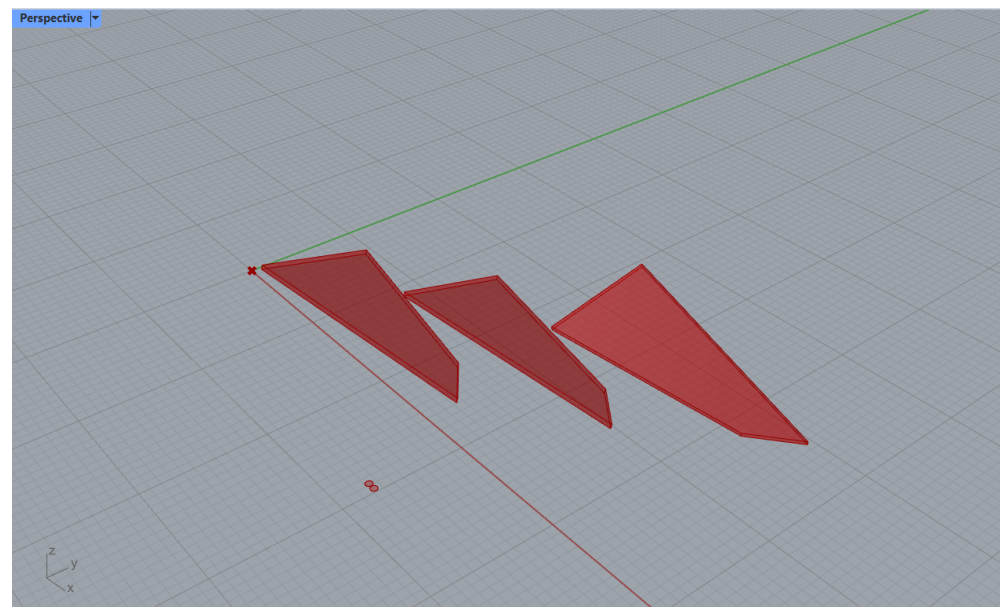
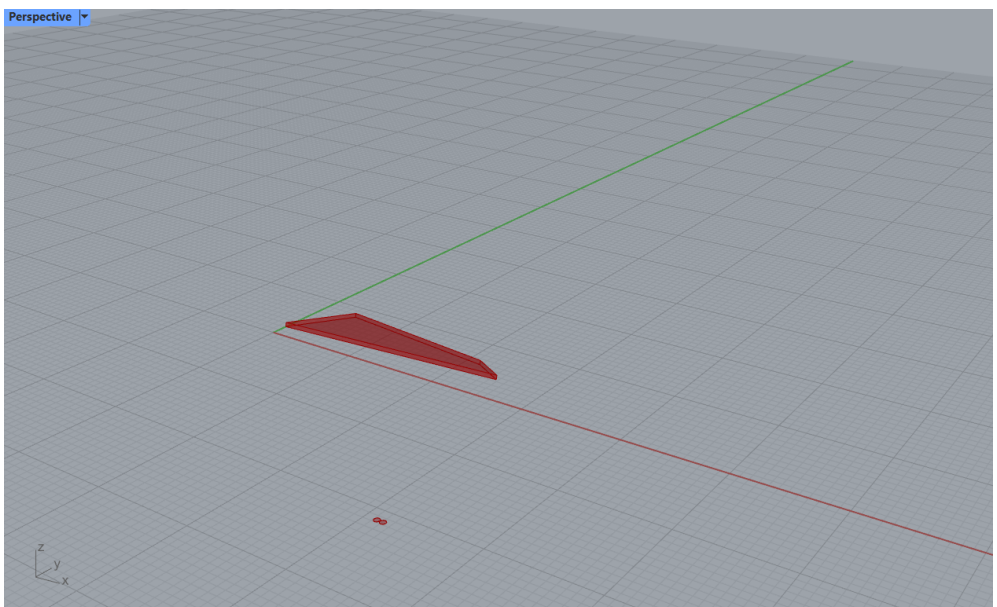
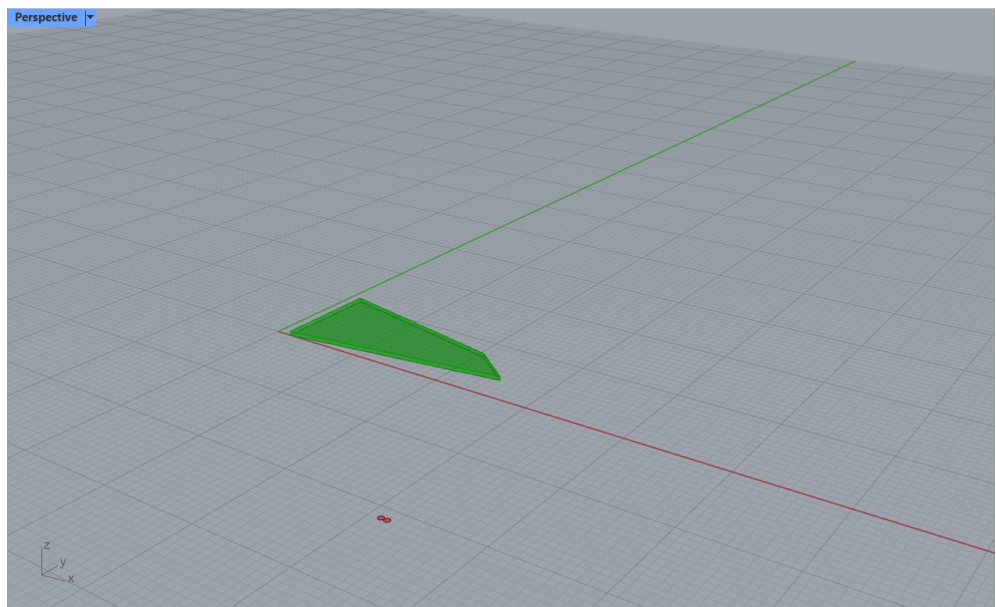
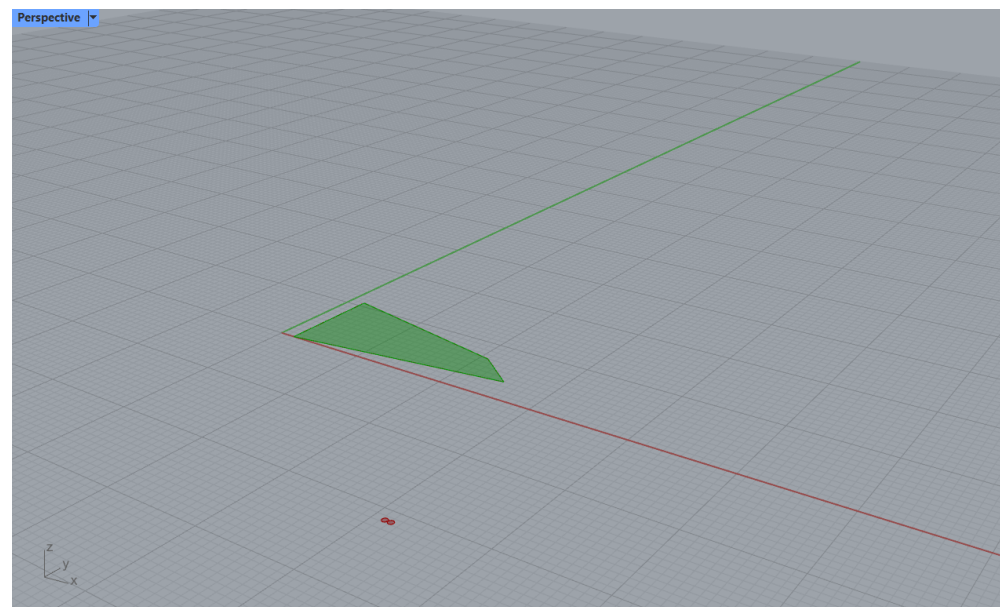
EAST ELEVATION

GRASSHOPPER SCRIPT



JUST USED BASIC COMMANDS TO GET CONTROL OF THE ROOF SHAPE AND SIZE

PROCESS



BAKING

