A black and white photograph of a modern architectural space. In the foreground, there's a curved wall with a fine-grained texture. To the left, a glass-enclosed structure, possibly a shower or a small room, is visible. The lighting is dramatic, creating strong shadows and highlights on the curved surfaces.

**ELEMENT**

**CHAPTER 1. TECHNOLOGY**

**CHAPTER 2. FORM**

**CHAPTER 3. DESIGN**

## CHAPTER 1. TECHNOLOGY

## CHAPTER 2. FORM

## CHAPTER 3. DESIGN

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TECTONICS

ROBOTIC FABRICATION

RHWC & CONCRETE CASTING

CHALLENGE

---

## CHAPTER 1. TECHNOLOGY

## CHAPTER 2. FORM

## CHAPTER 3. DESIGN

---

VOLUME

EXPRESSION

NATURE

---

**CHAPTER 1. TECHNOLOGY**

**CHAPTER 2. FORM**

**CHAPTER 3. DESIGN**

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SITE  
SPATIAL

CLIMATE  
STRUCTURAL

BUILDING METHOD  
VISUALISATIONS

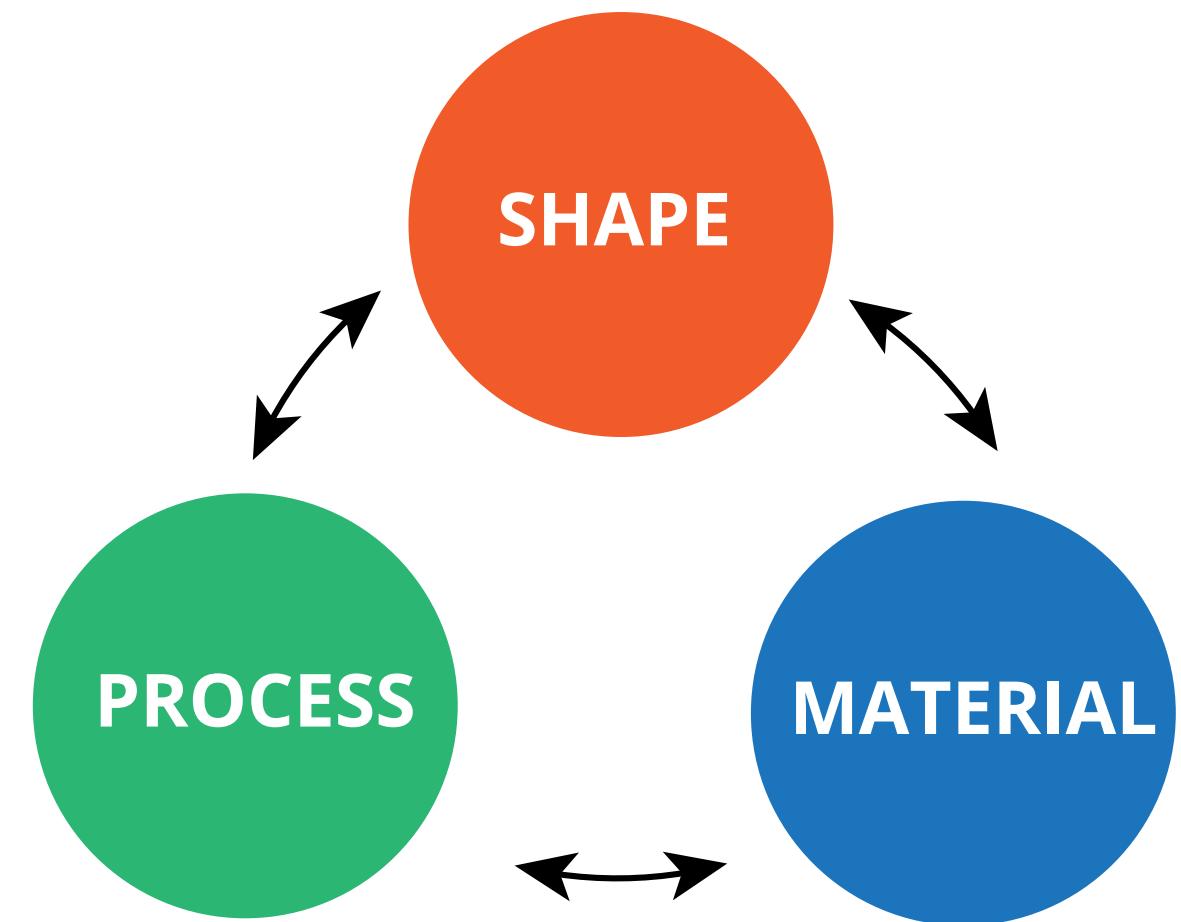
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# CHAPTER 1. TECHNOLOGY

**TECTONICS:**

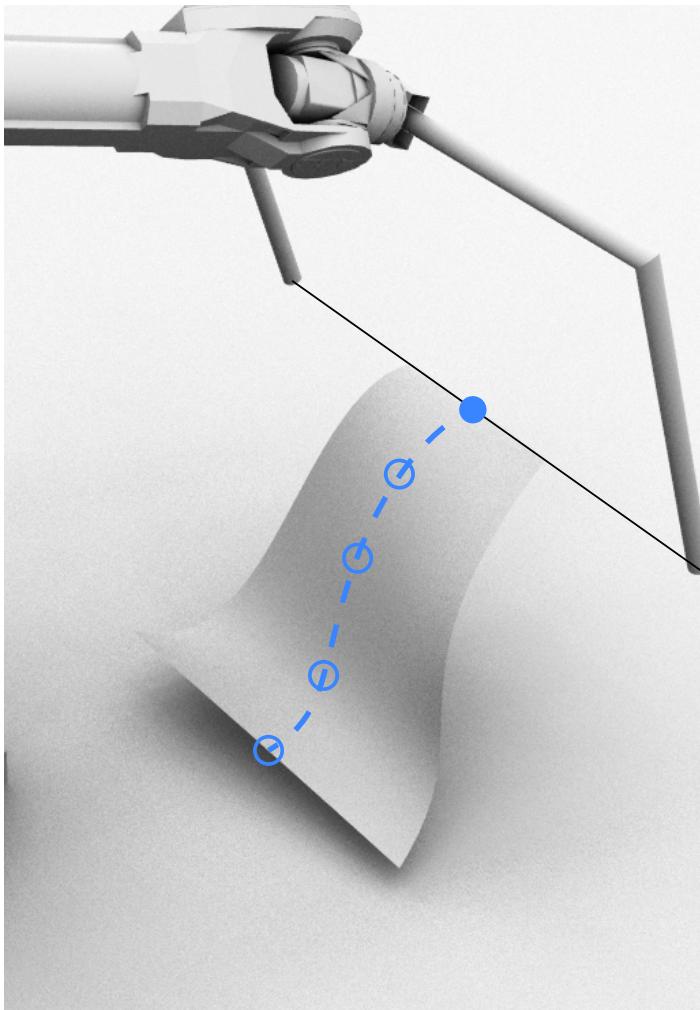
the relationship between shape, material and process



## ROBOTIC FABRICATION ROBOTS IN ARCHITECTURE



## EPS FORMWORK CONCRETE CASTING



Ruled surface cutting

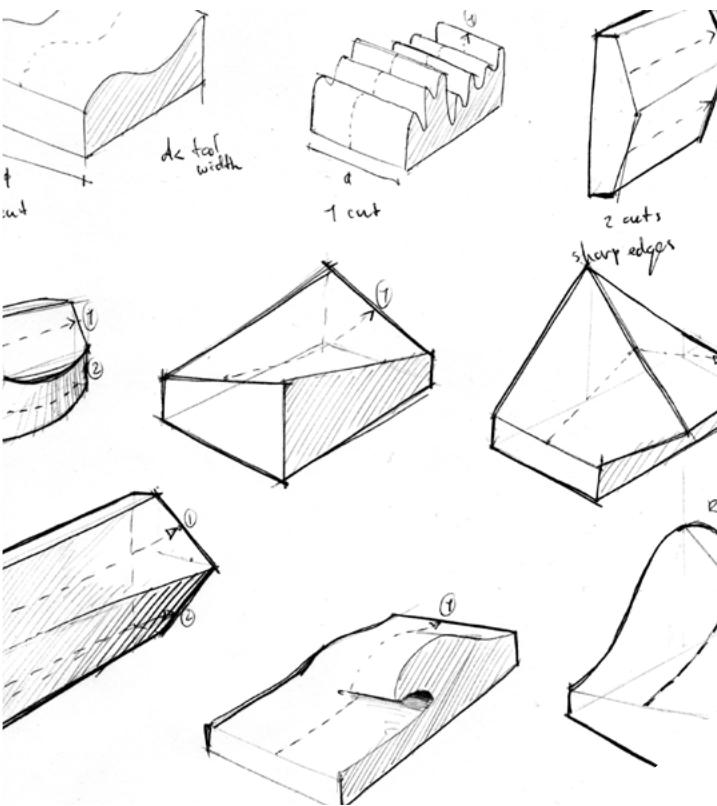


Leuven test pavilion

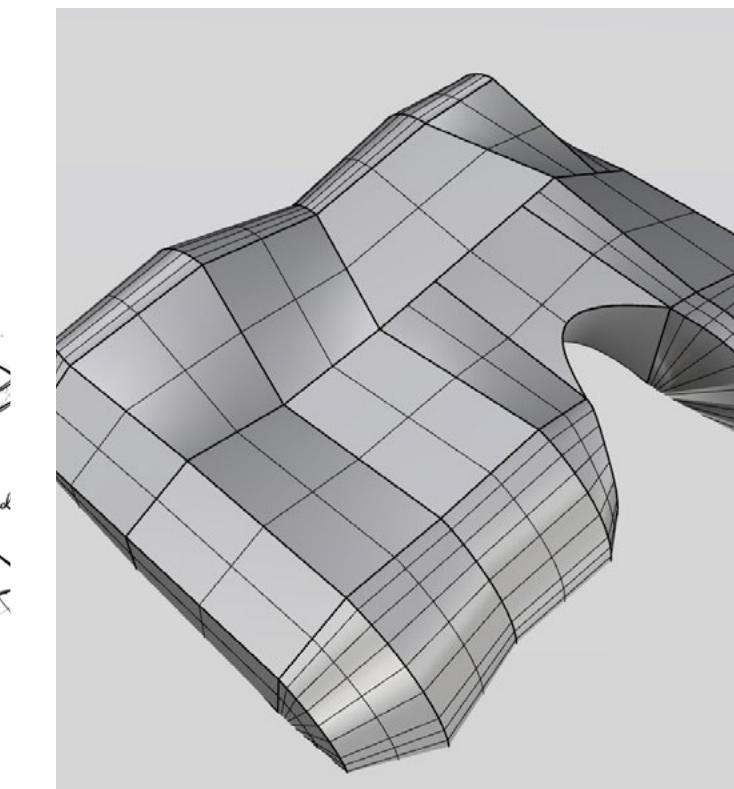


Future Systems' Spencerdock Bridge

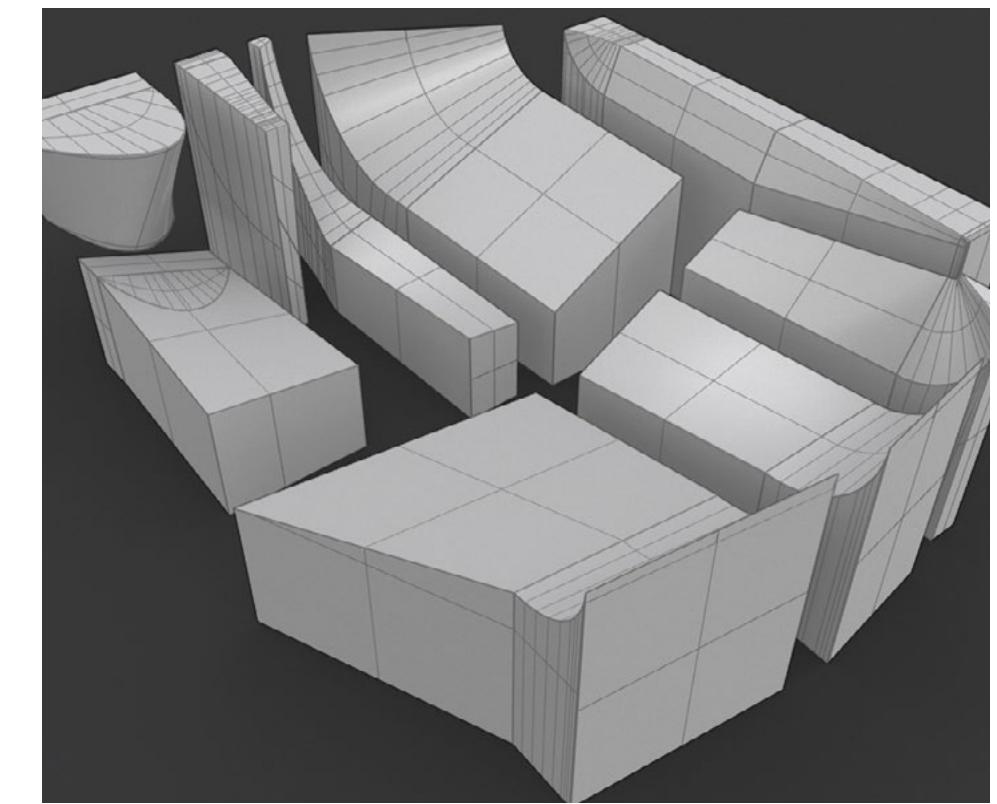
## RULED SURFACE SIMPLICITY PREFABRICATE



Explorations into ruled geometry



End part of the pavilion with flat backside



Different parts because of concave folds

*Design a building which expresses the potential of robotic hot-wire cutting and concrete casting.*

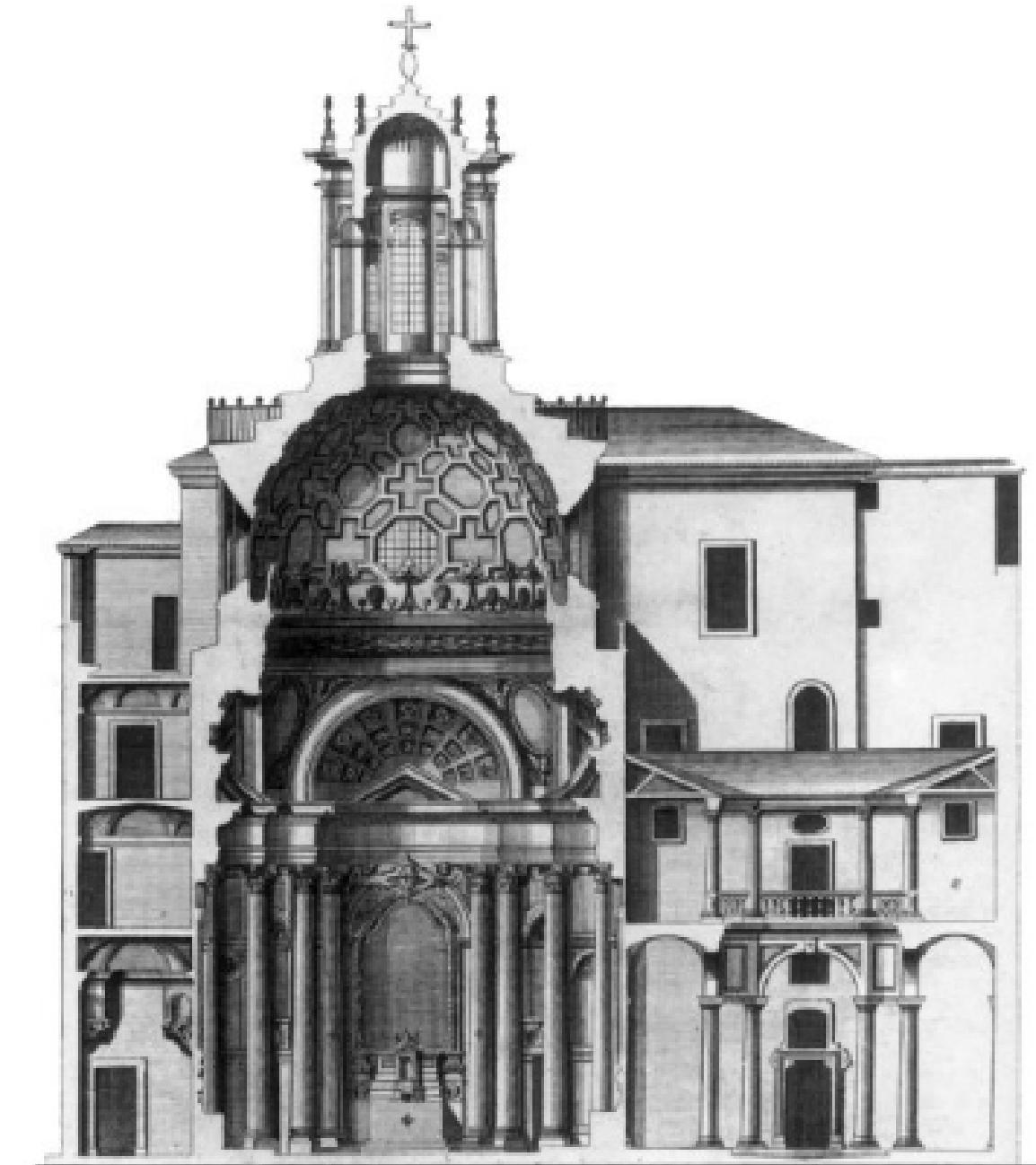


## CHAPTER 2. FORM

**VOLUME**

**ISOMORPHISM**

**ATMOSPHERE**

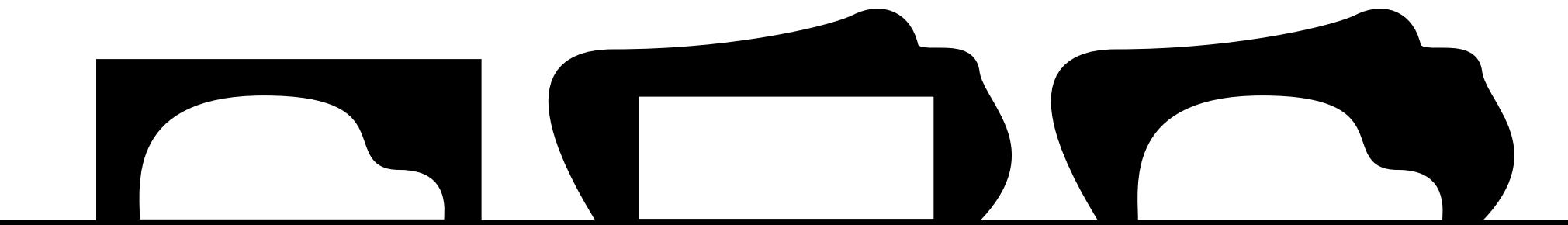


Section, San Carlo alle Quattro Fontane, Borromini, Rome, 1646

**VOLUME**

**ISOMORPHISM**

**ATMOSPHERE**



Scheme on isomorphism

REPRESENTATION OF TIME  
FLUENT AESTHETICS  
CONTEXT



**MEIJENDEL  
HORIZONTALITY  
ELEMENTAL**

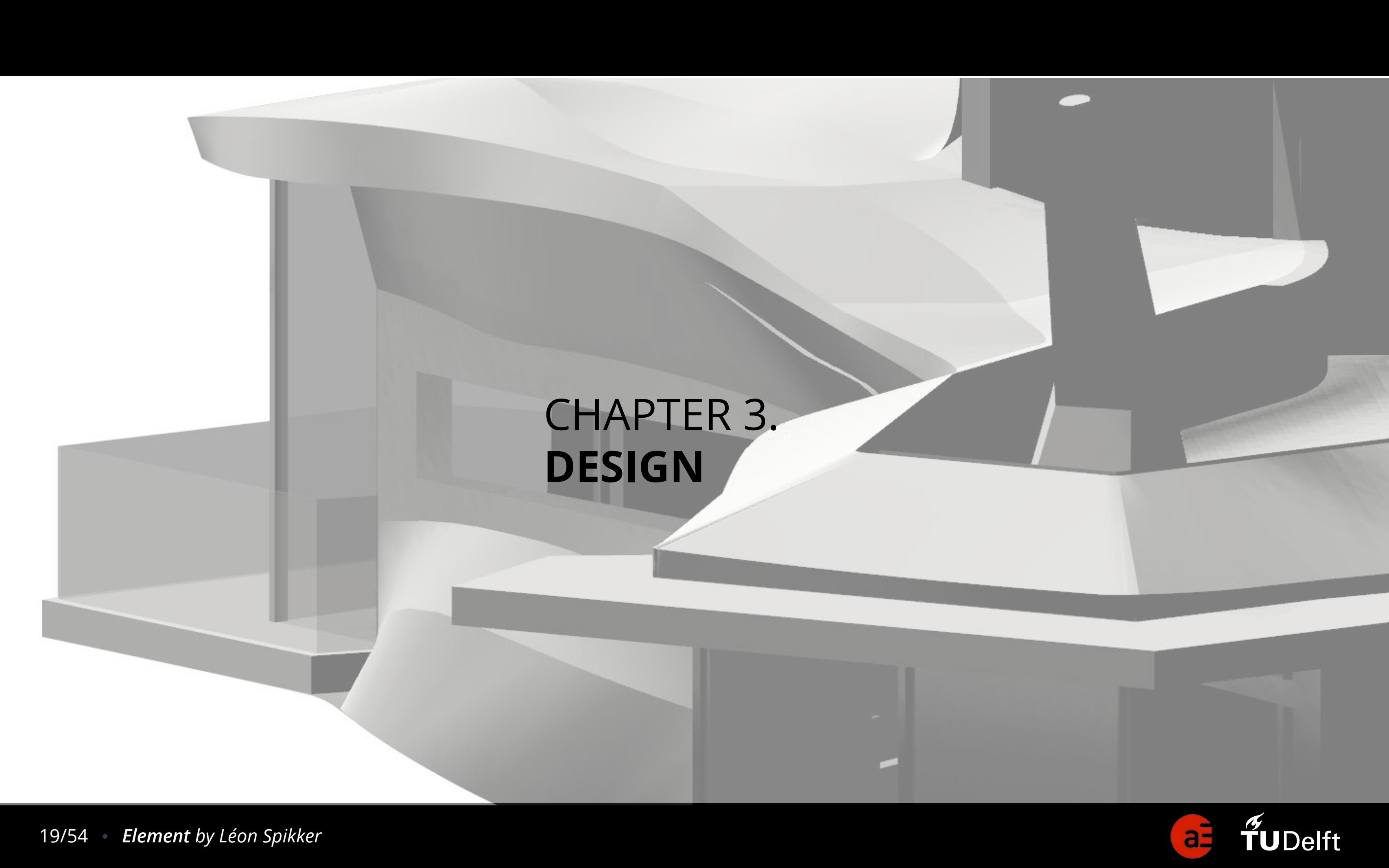


**MEIJENDEL  
HORIZONTALITY  
ELEMENTAL**



**MEIJENDEL  
HORIZONTALITY  
ELEMENTAL**

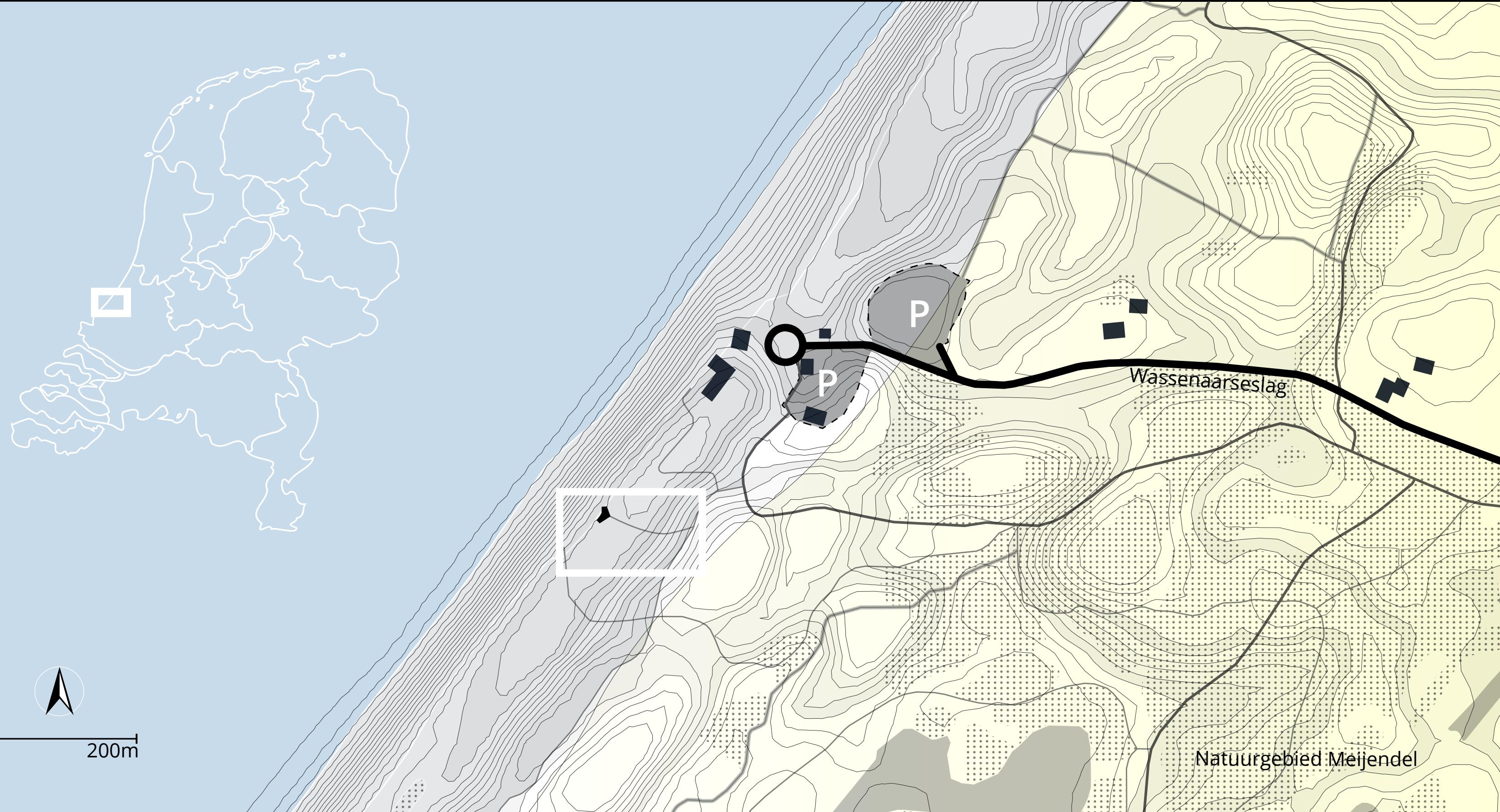


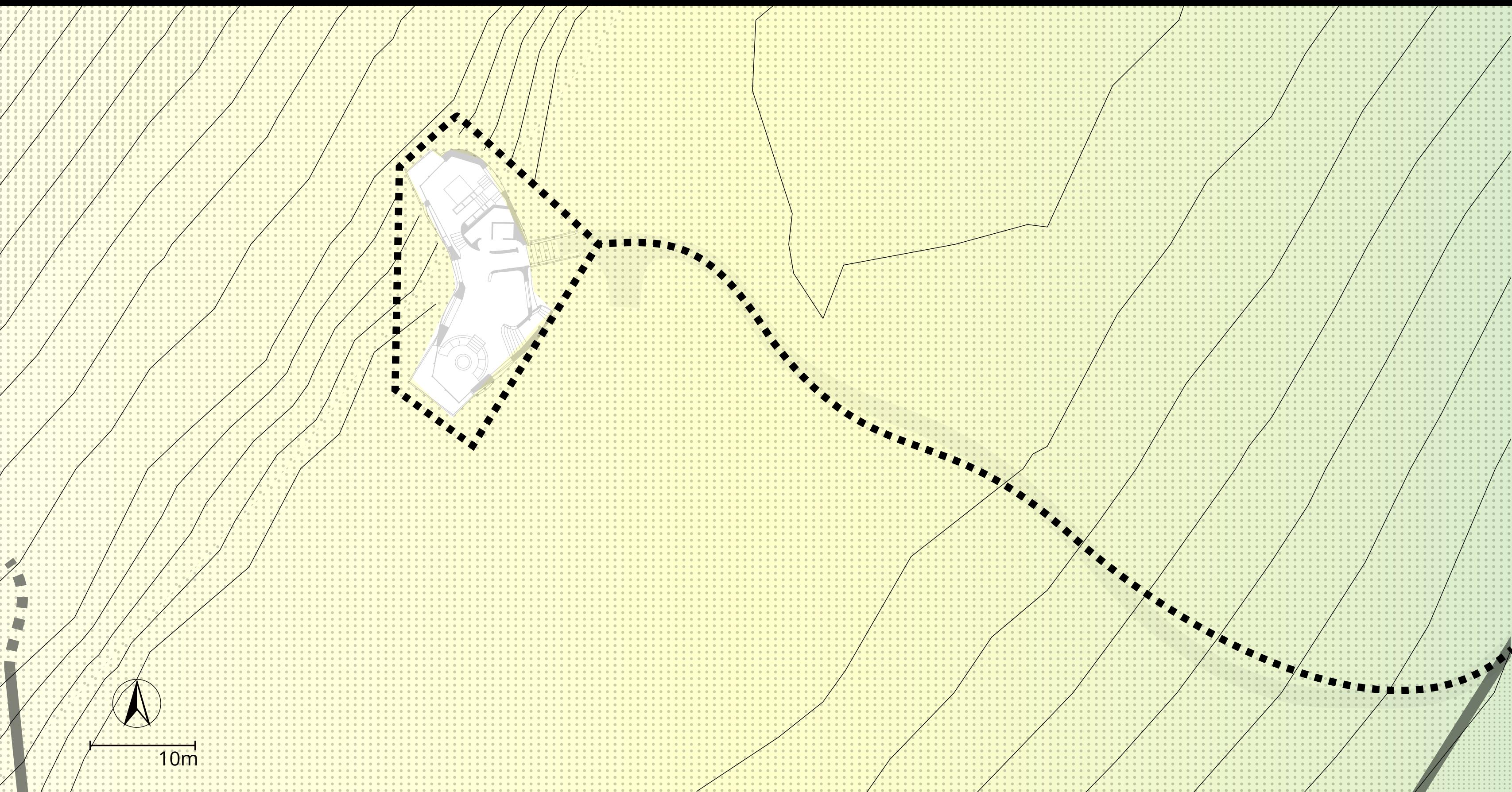


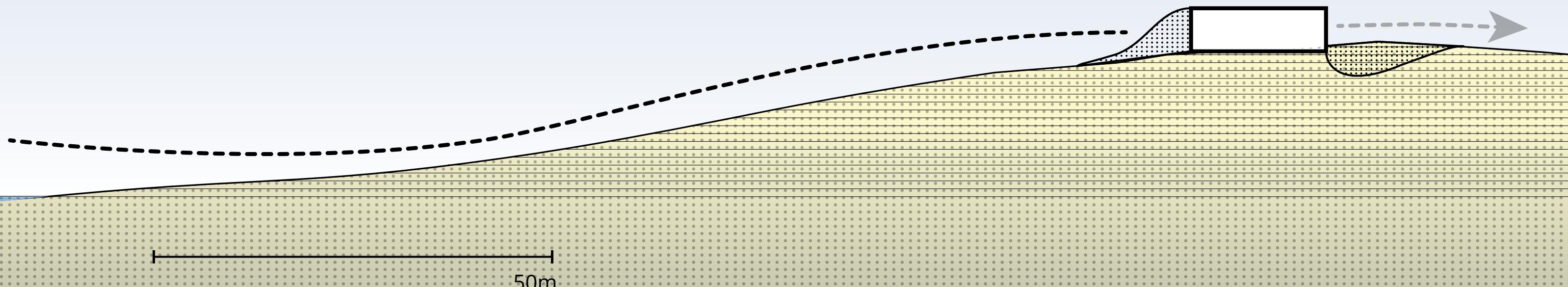
## CHAPTER 3. DESIGN

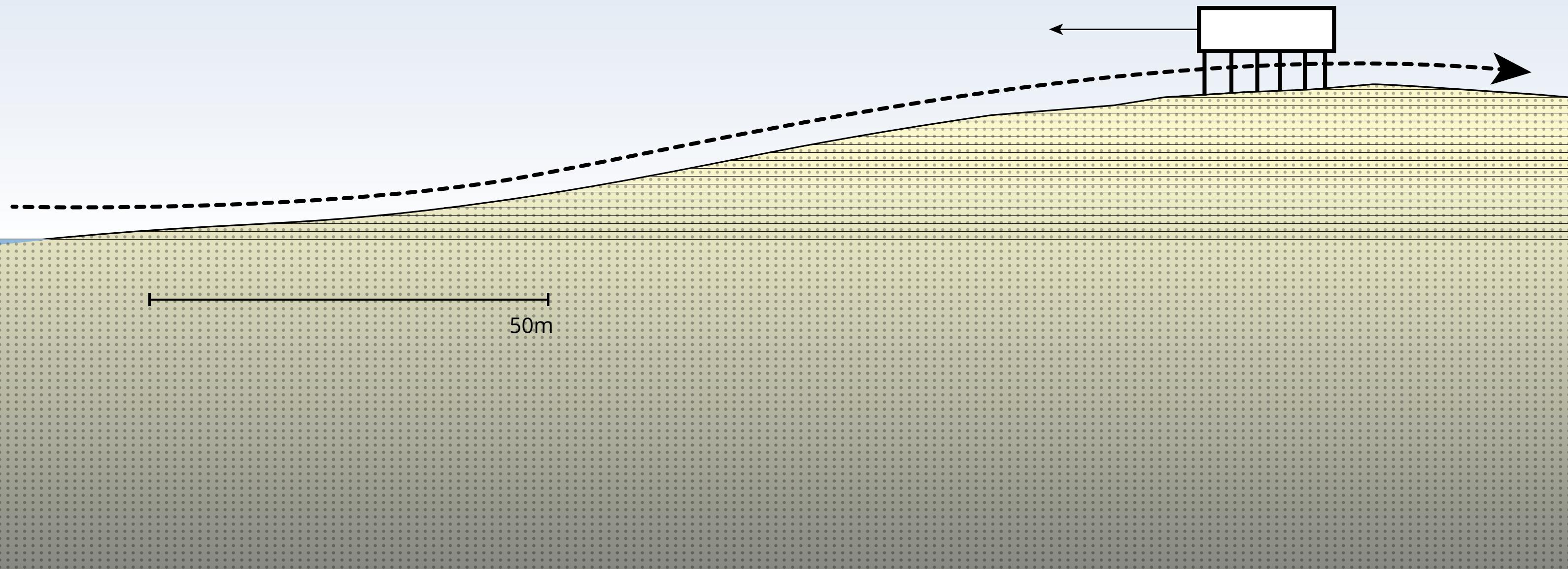
## CHAPTER 3. DESIGN

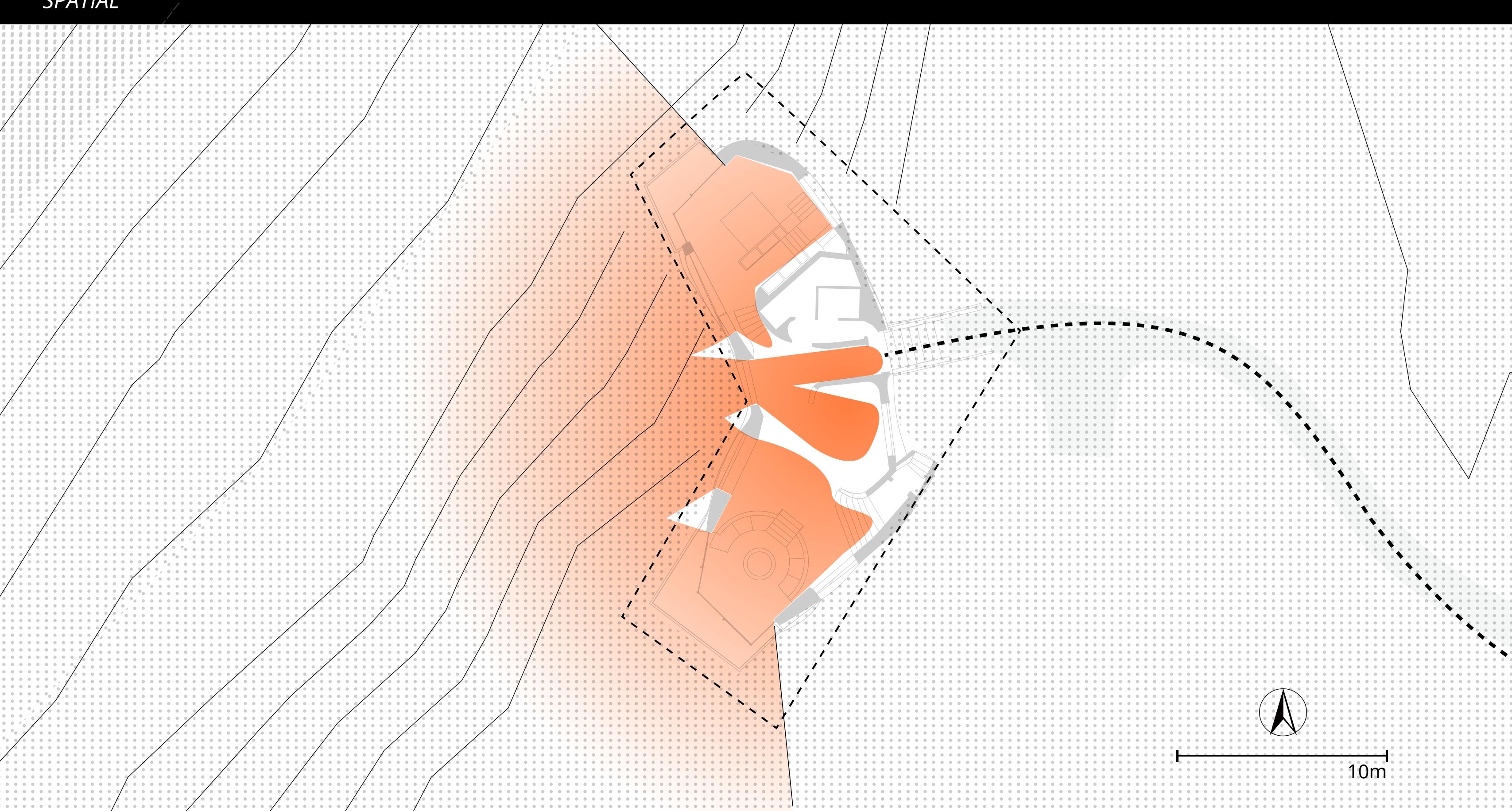
### SITE

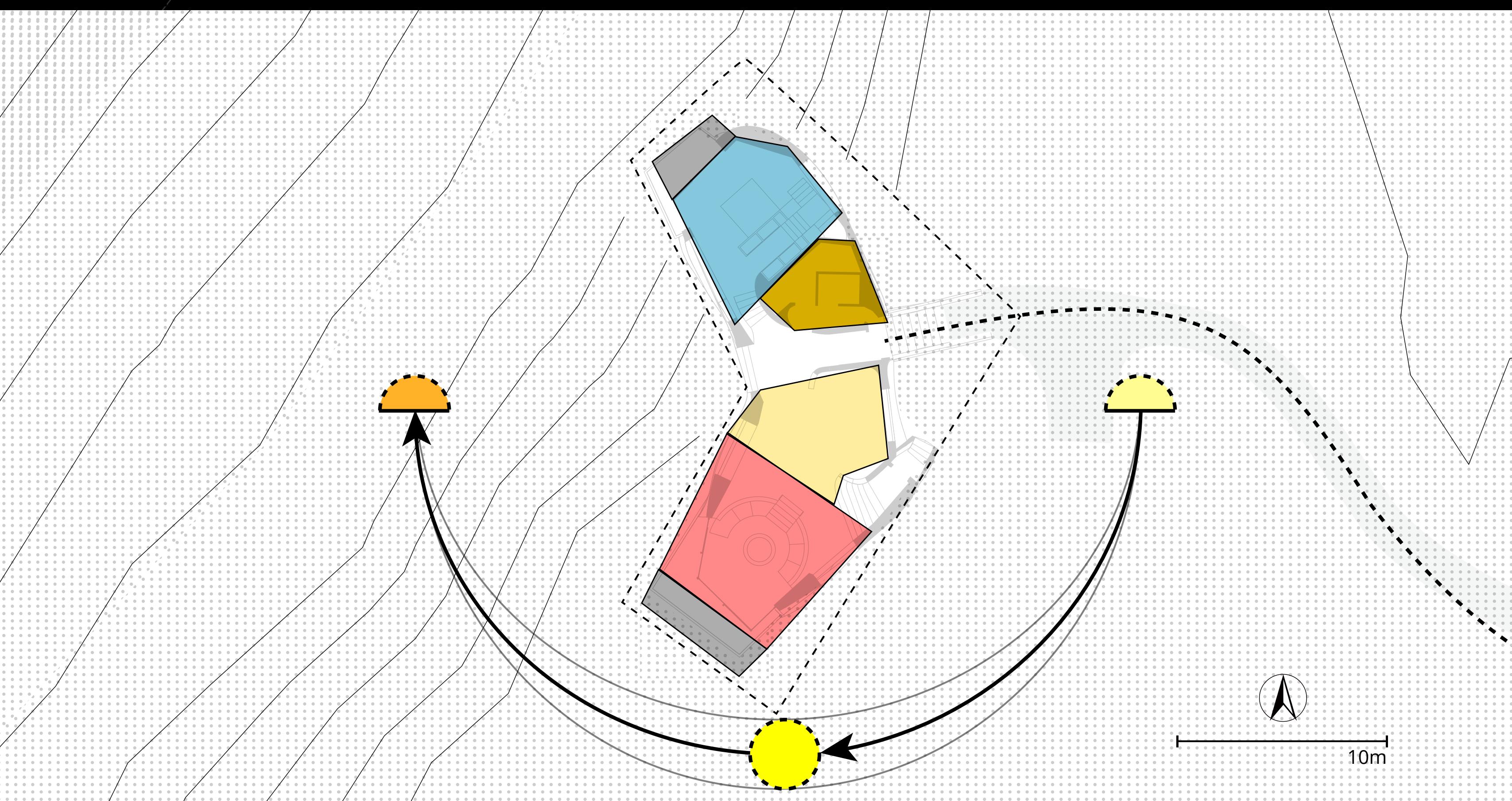


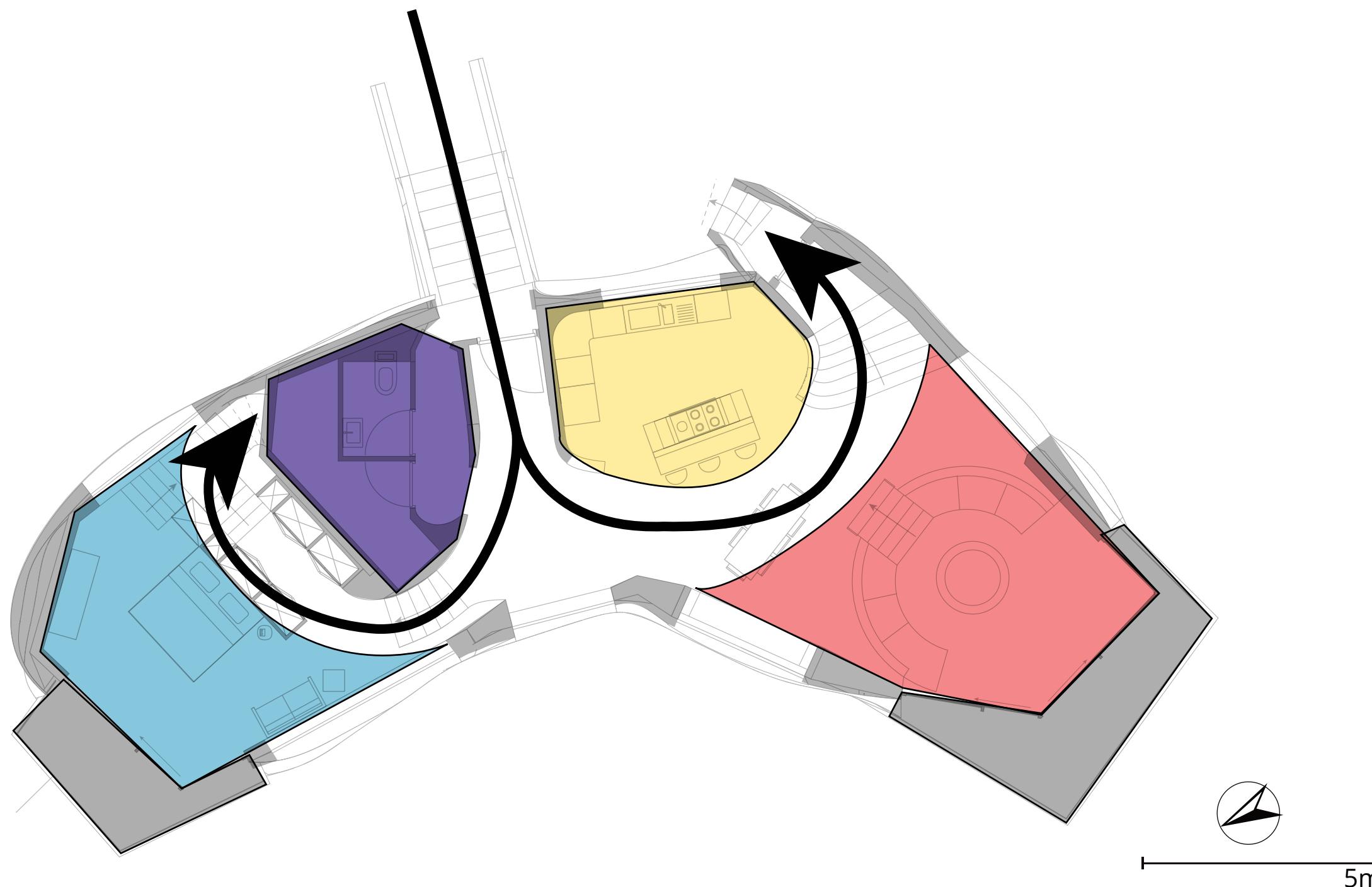


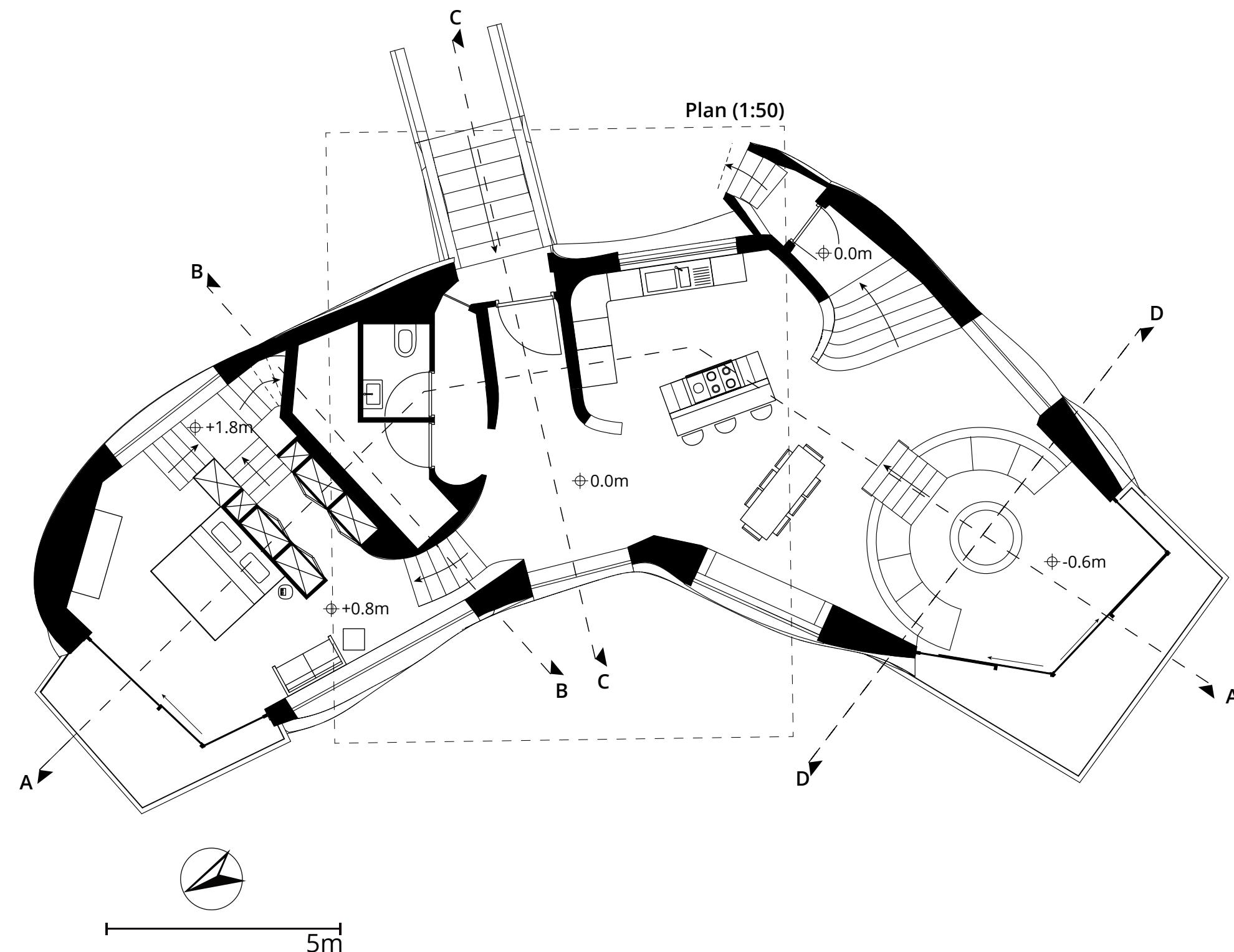


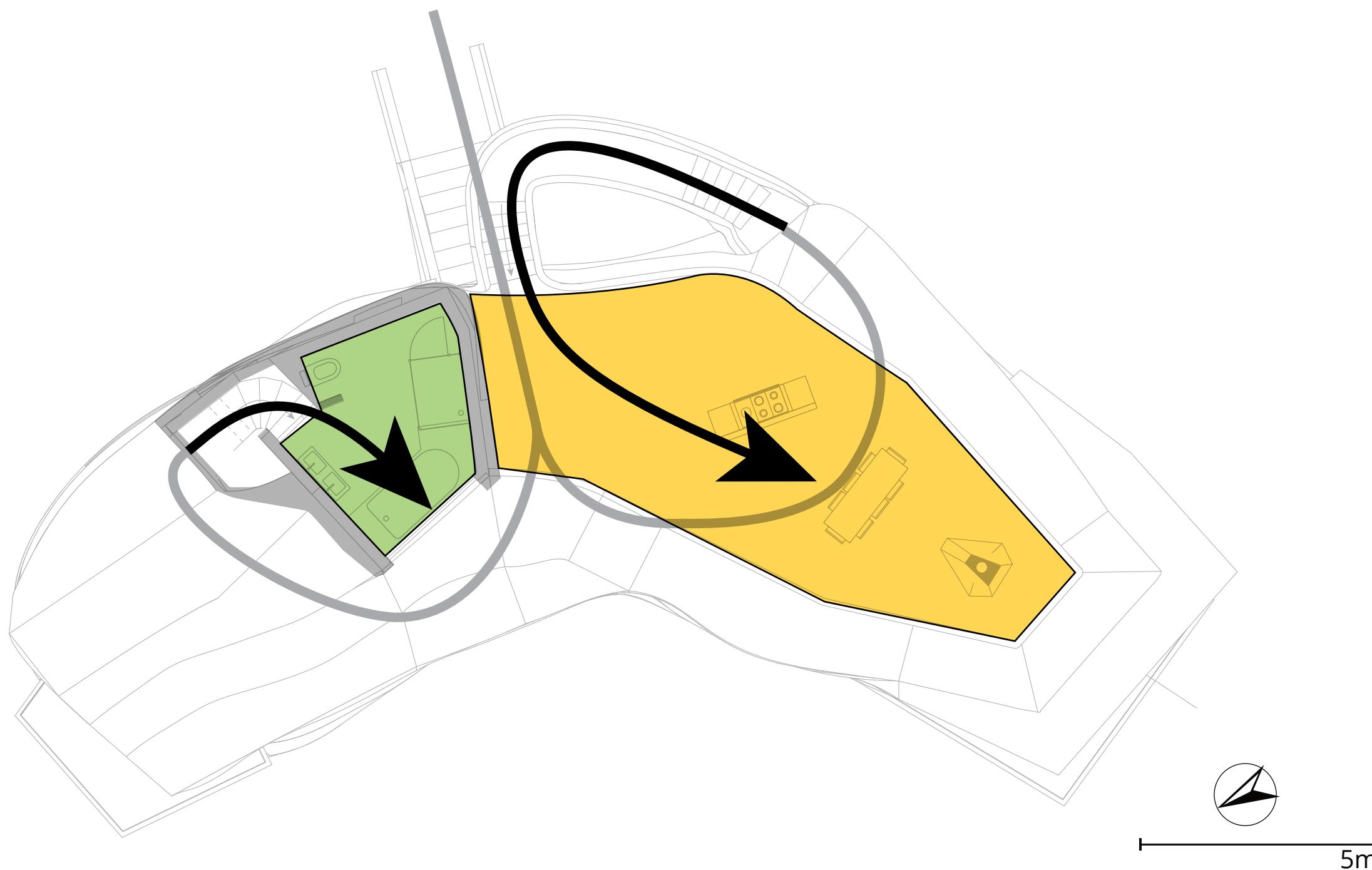


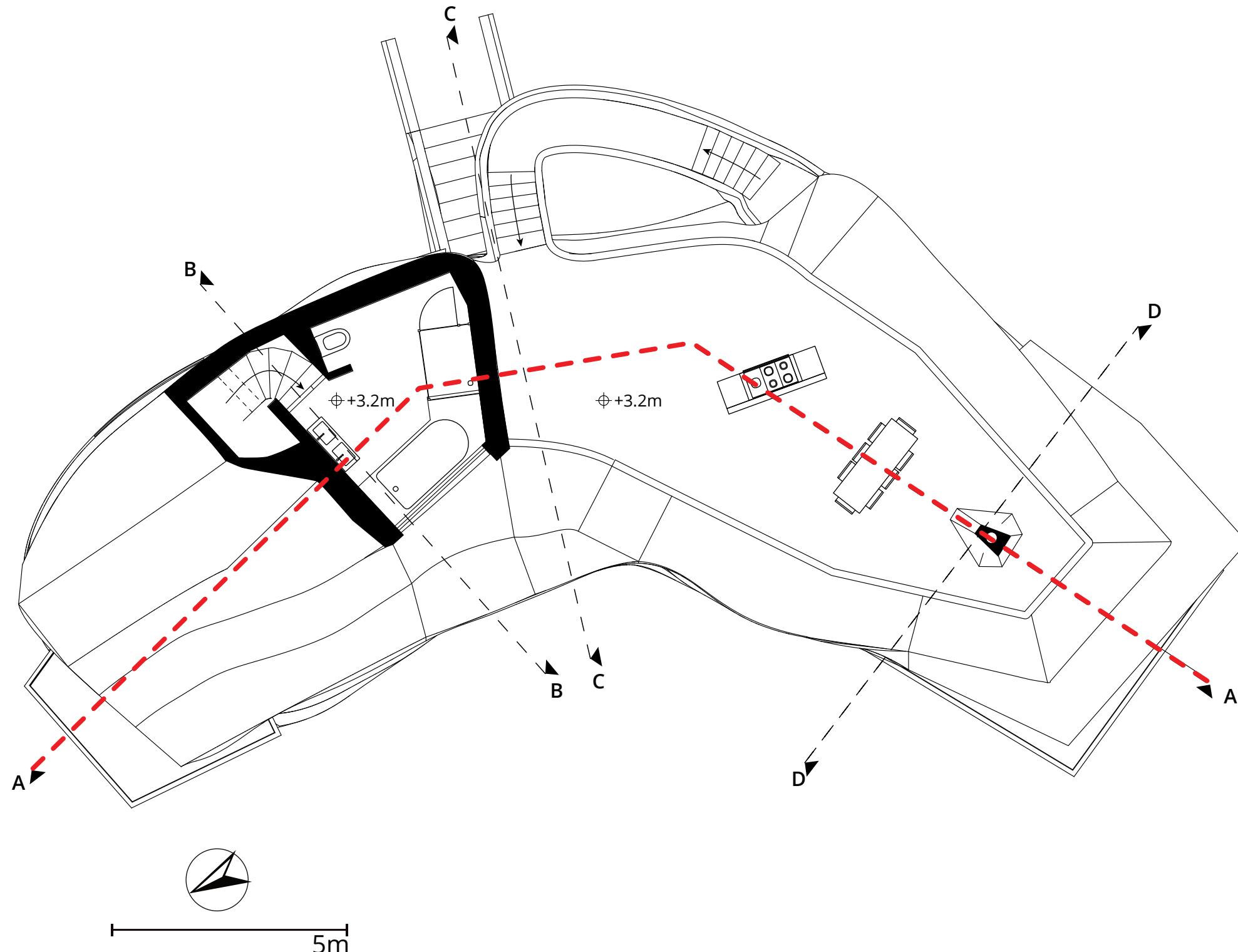






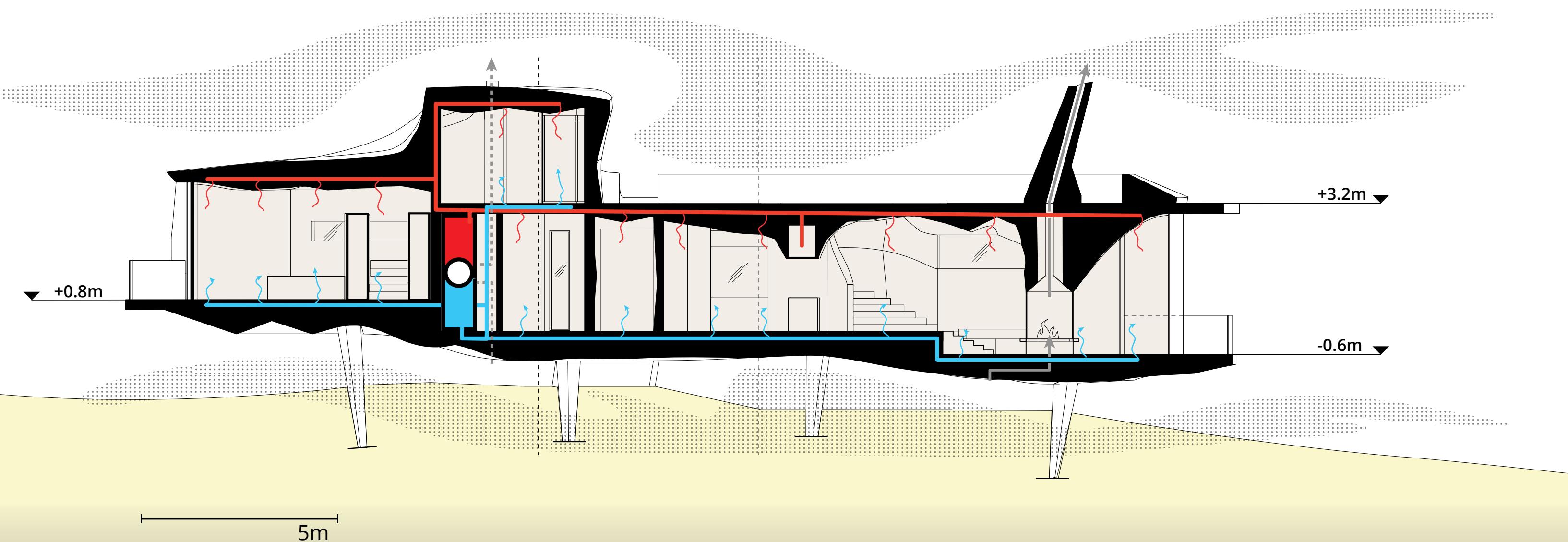




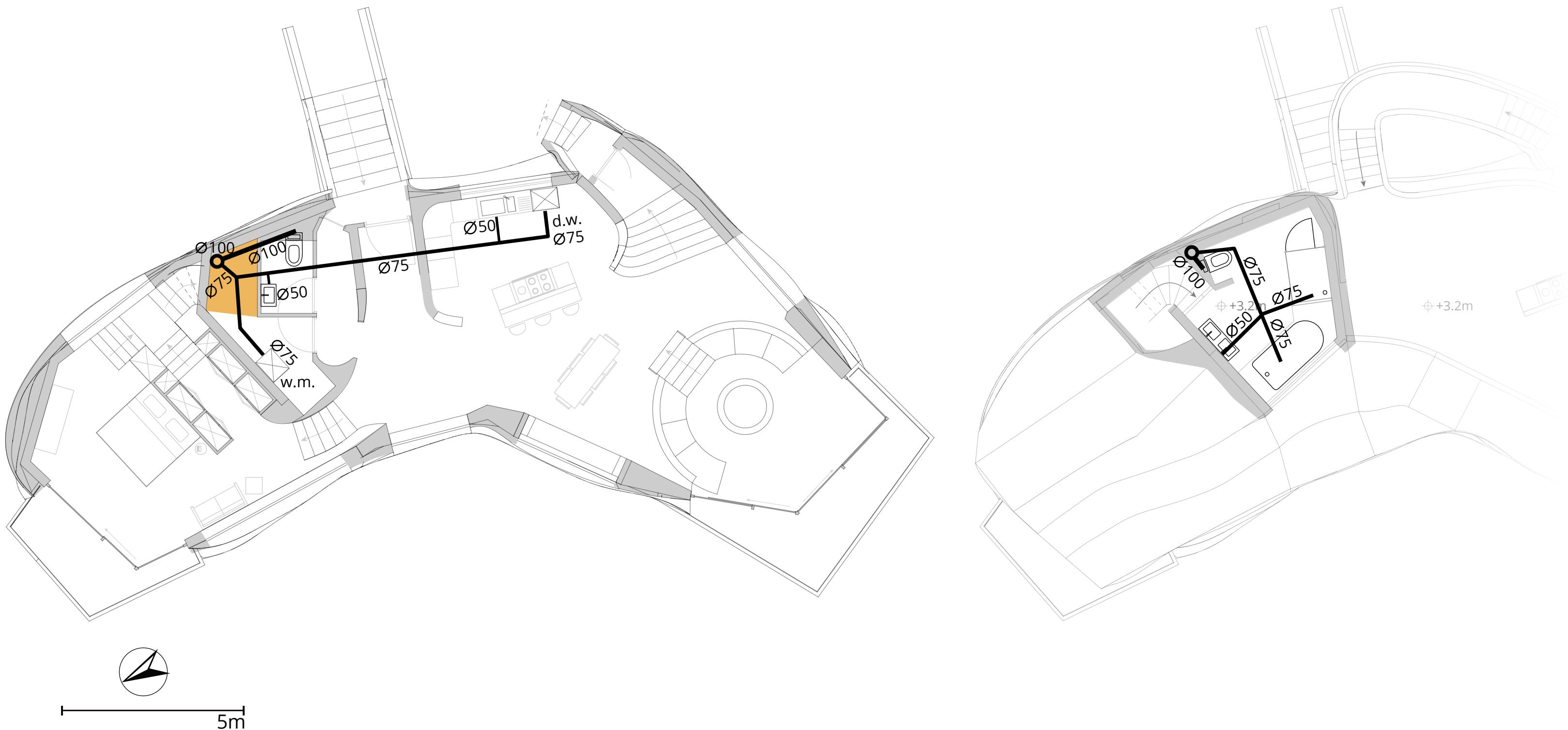


## CHAPTER 3. DESIGN

### CLIMATE

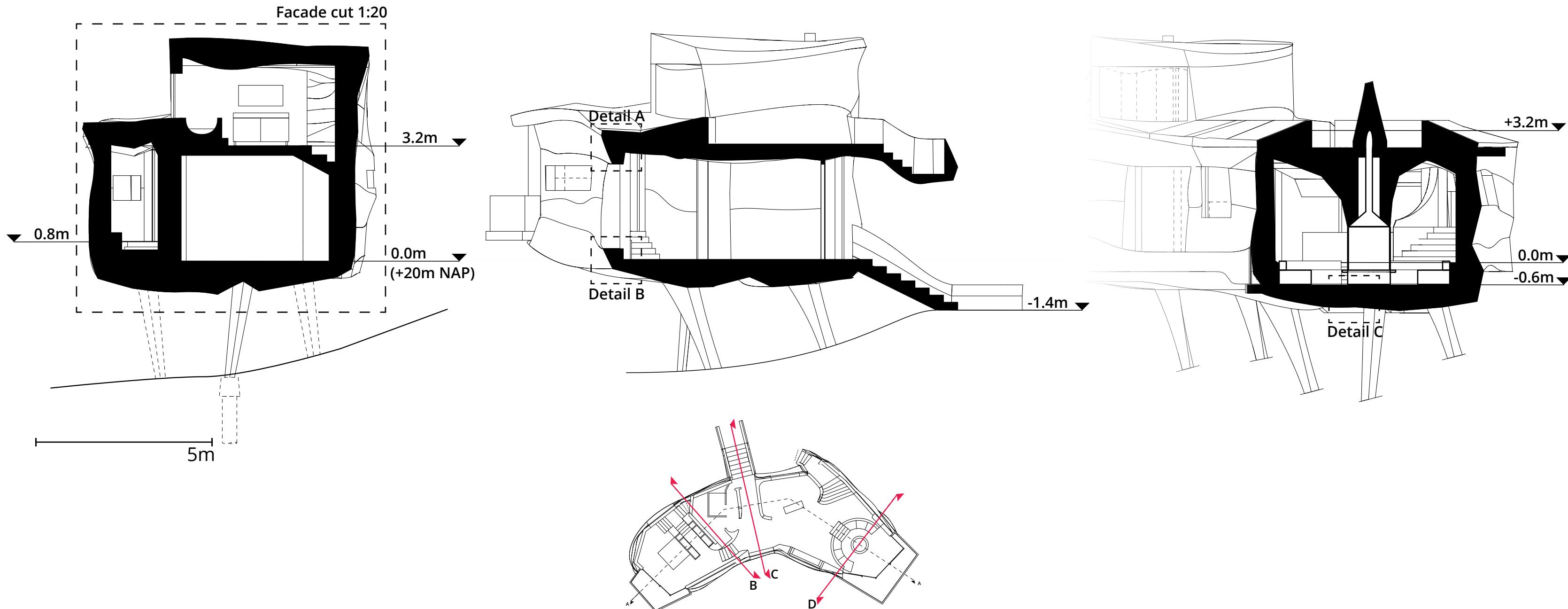


**CHAPTER 3. DESIGN**  
**INSTALLATION**



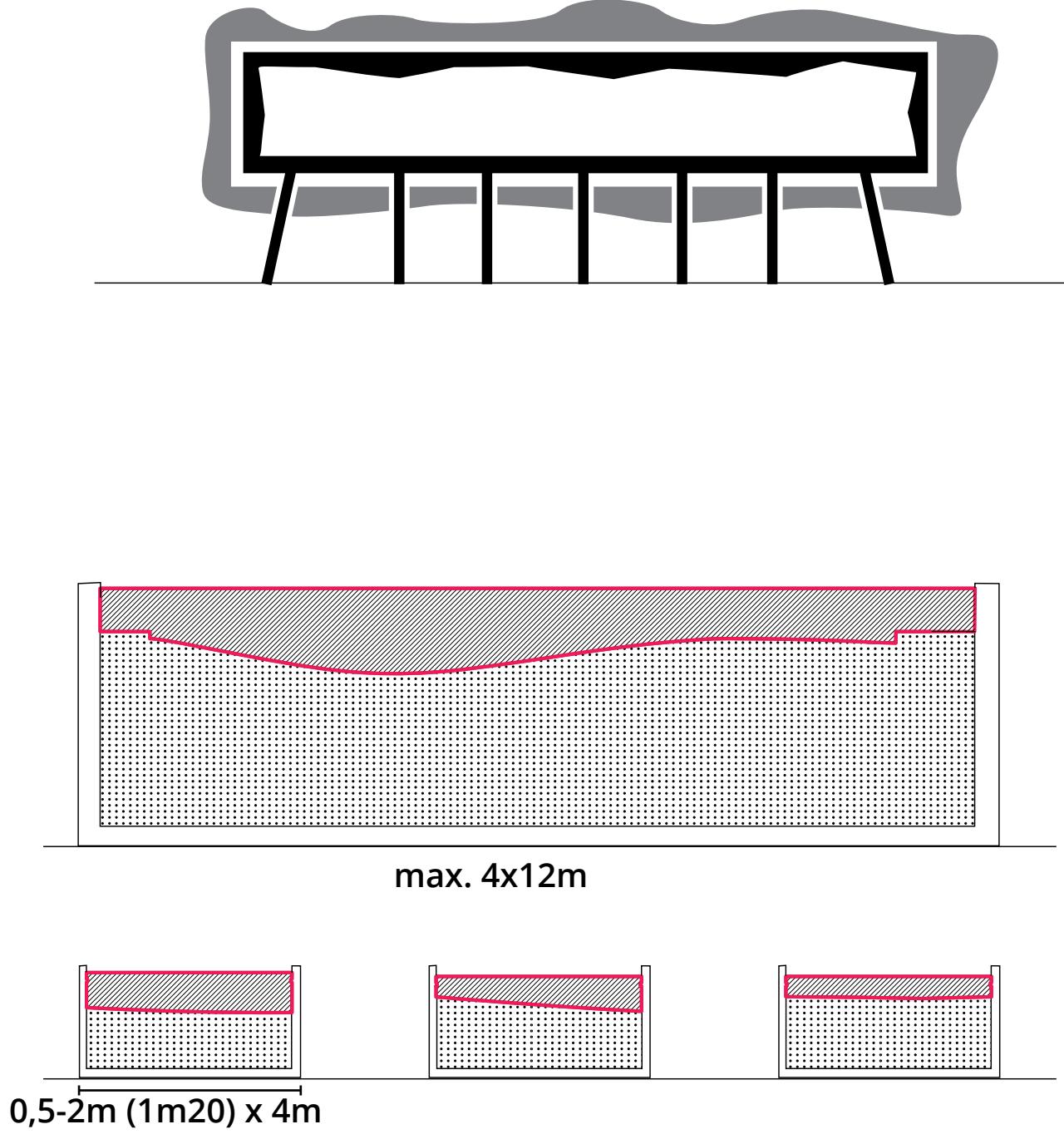
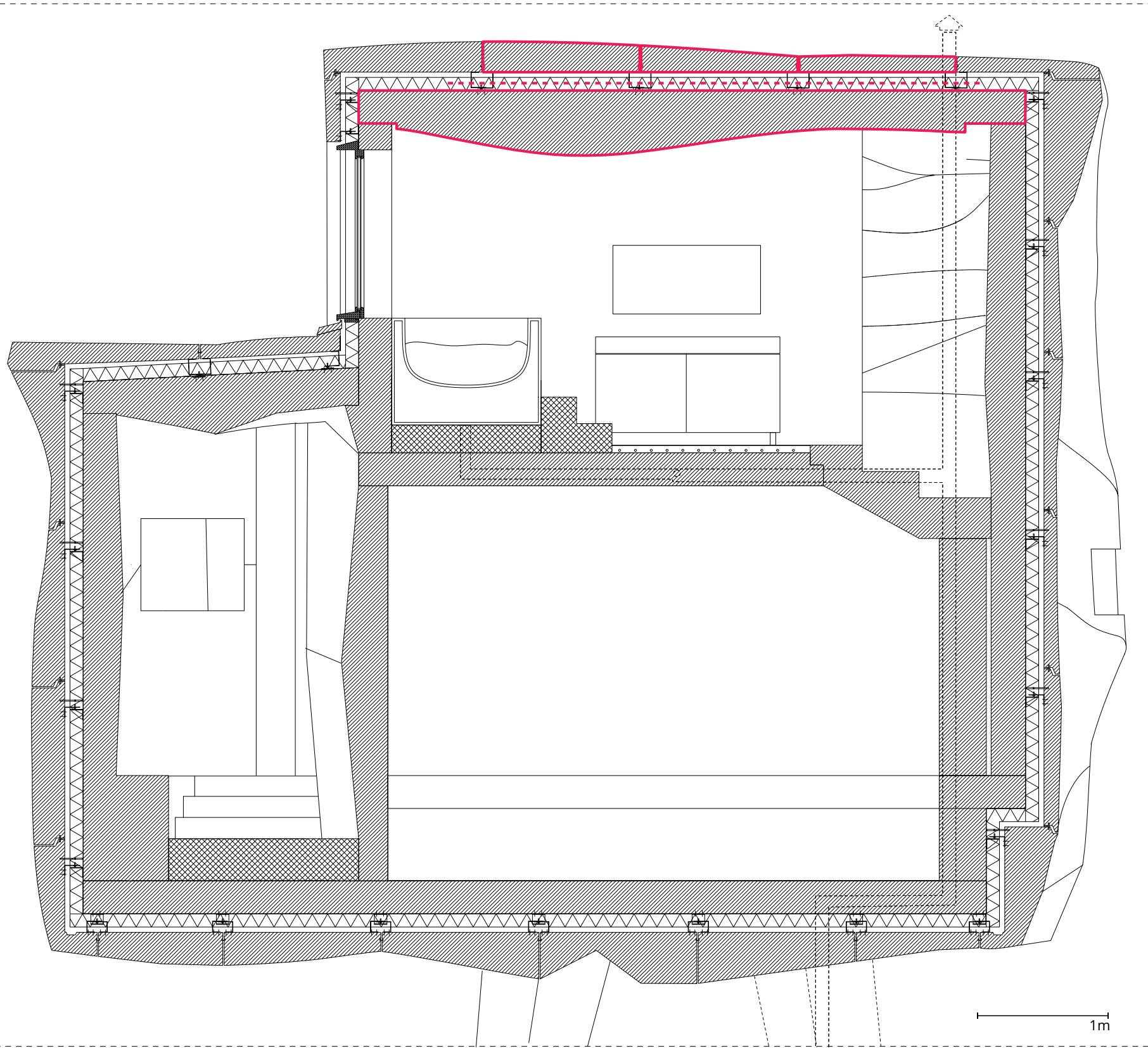
## CHAPTER 3. DESIGN

### STRUCTURAL

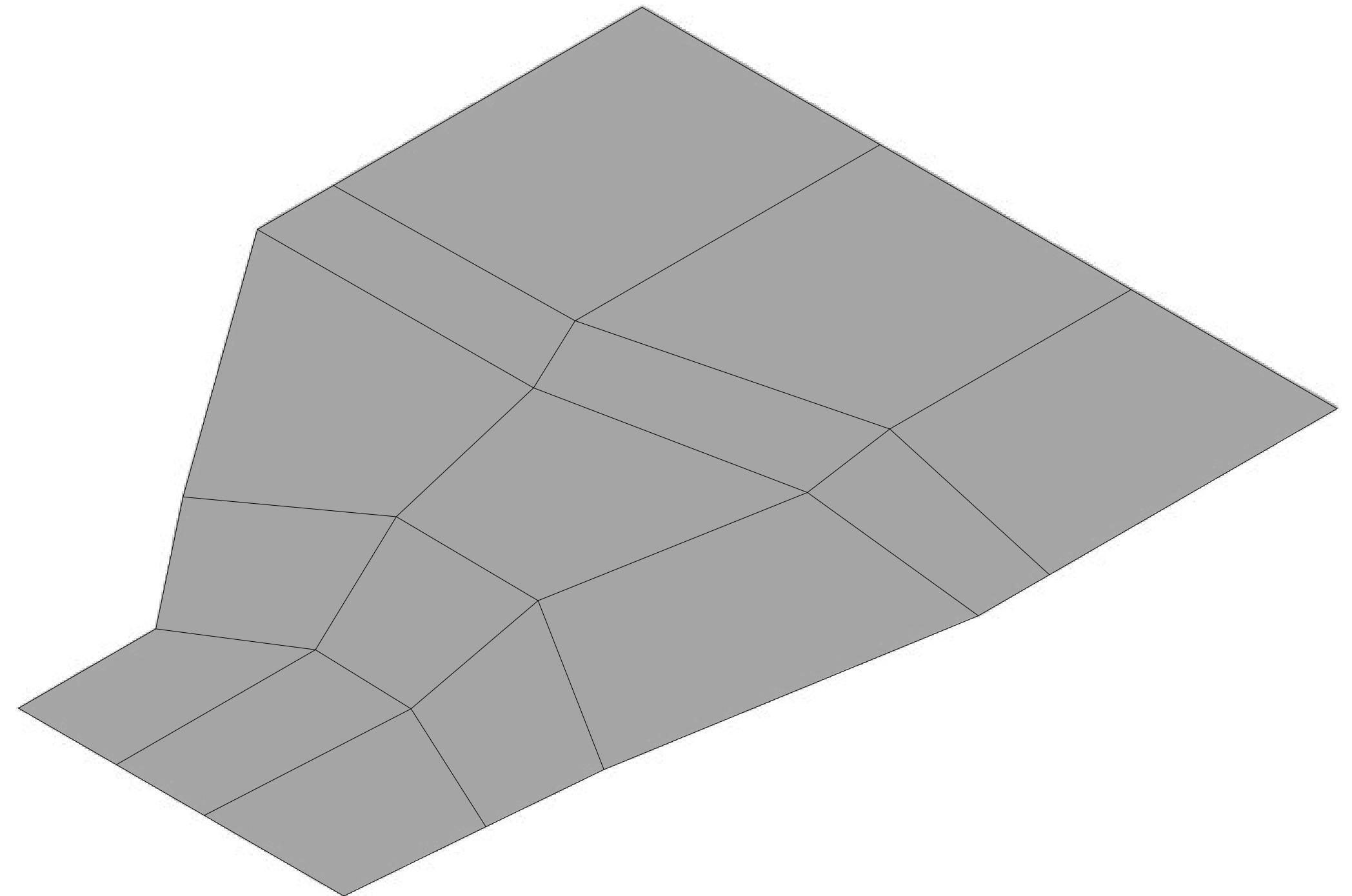


## CHAPTER 3. DESIGN

### STRUCTURAL

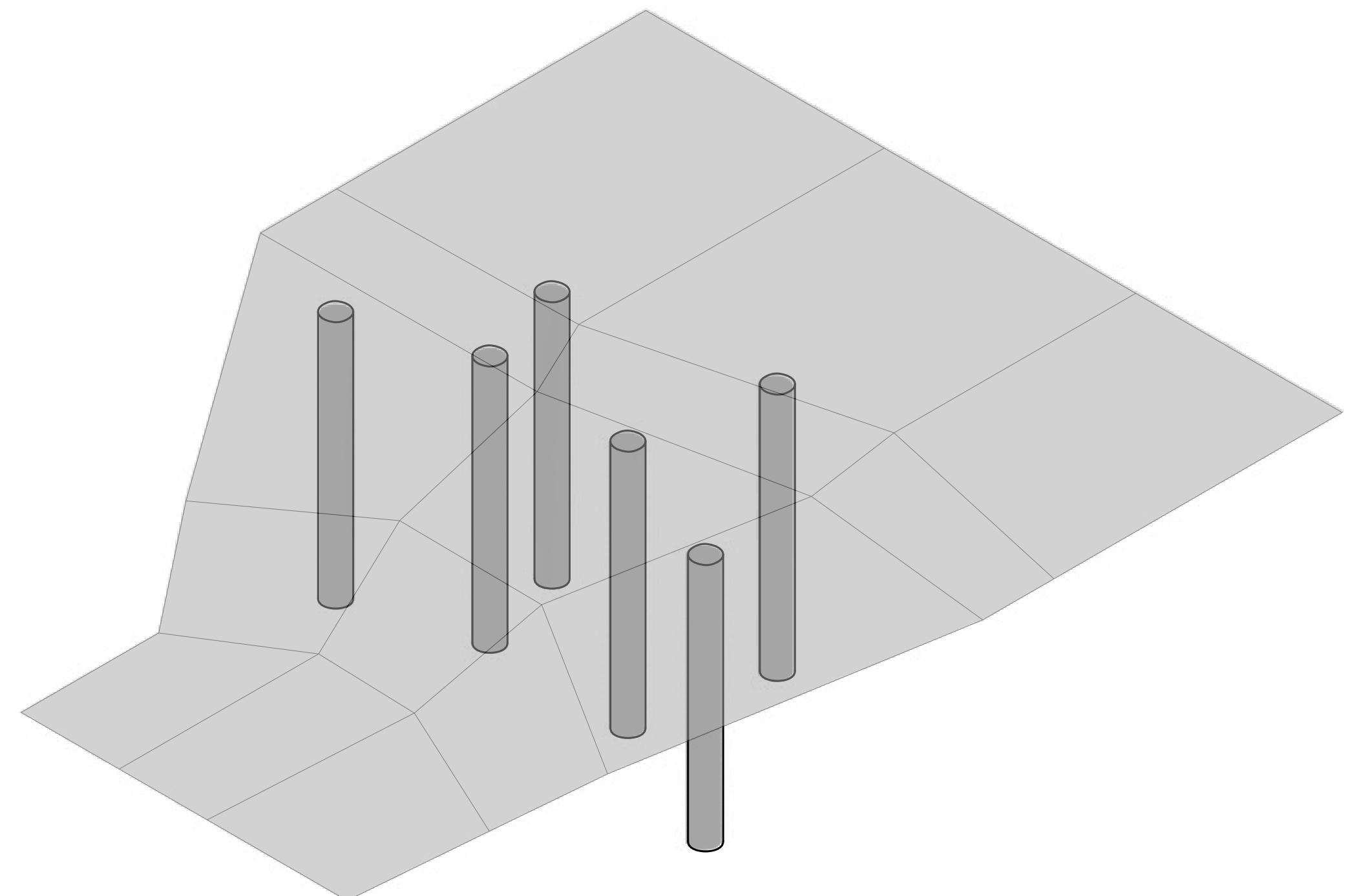


## SANDY DUNE LANDSCAPE



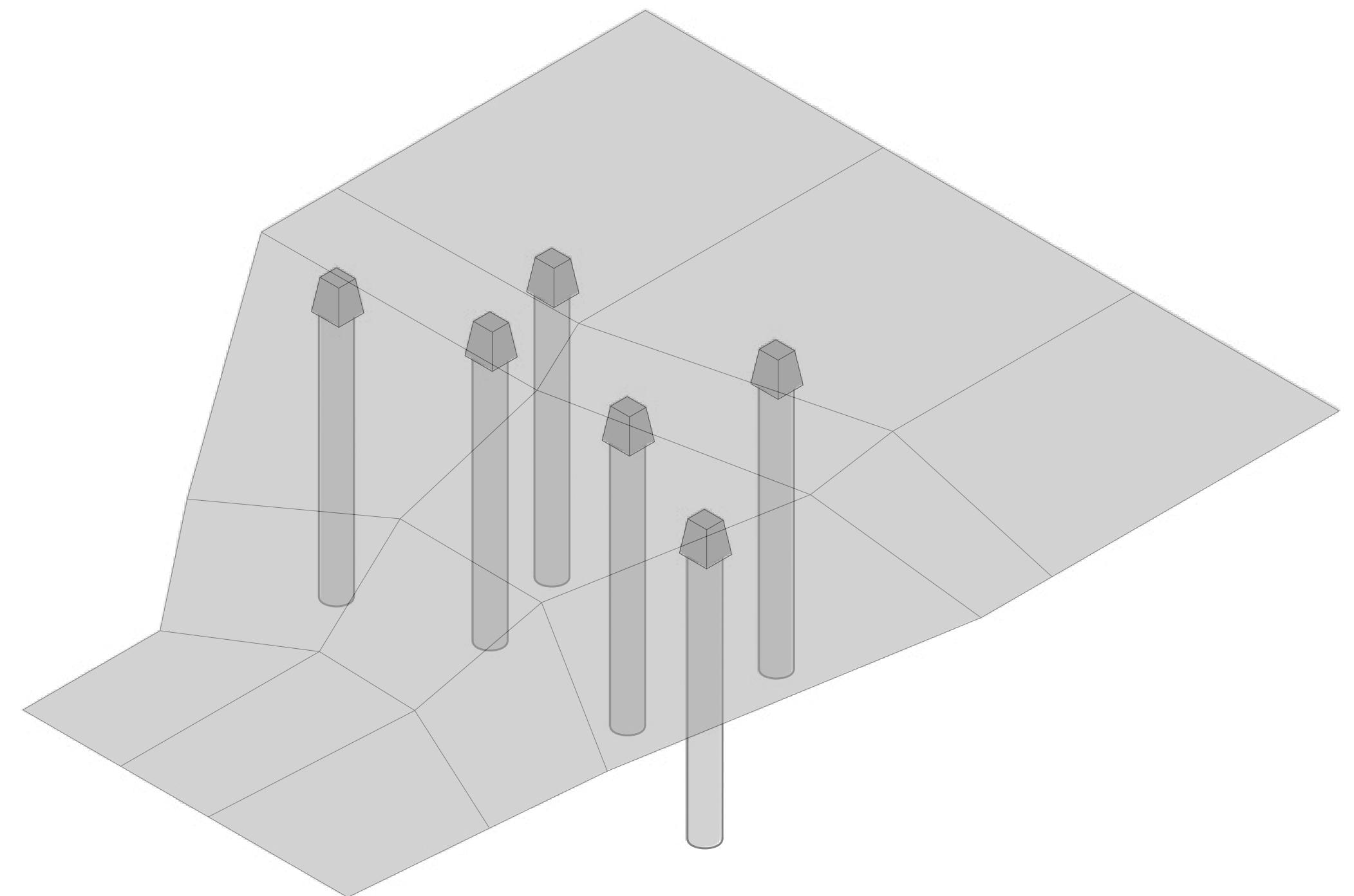
## DEEP FOUNDATION

(concrete prefab D=500mm)

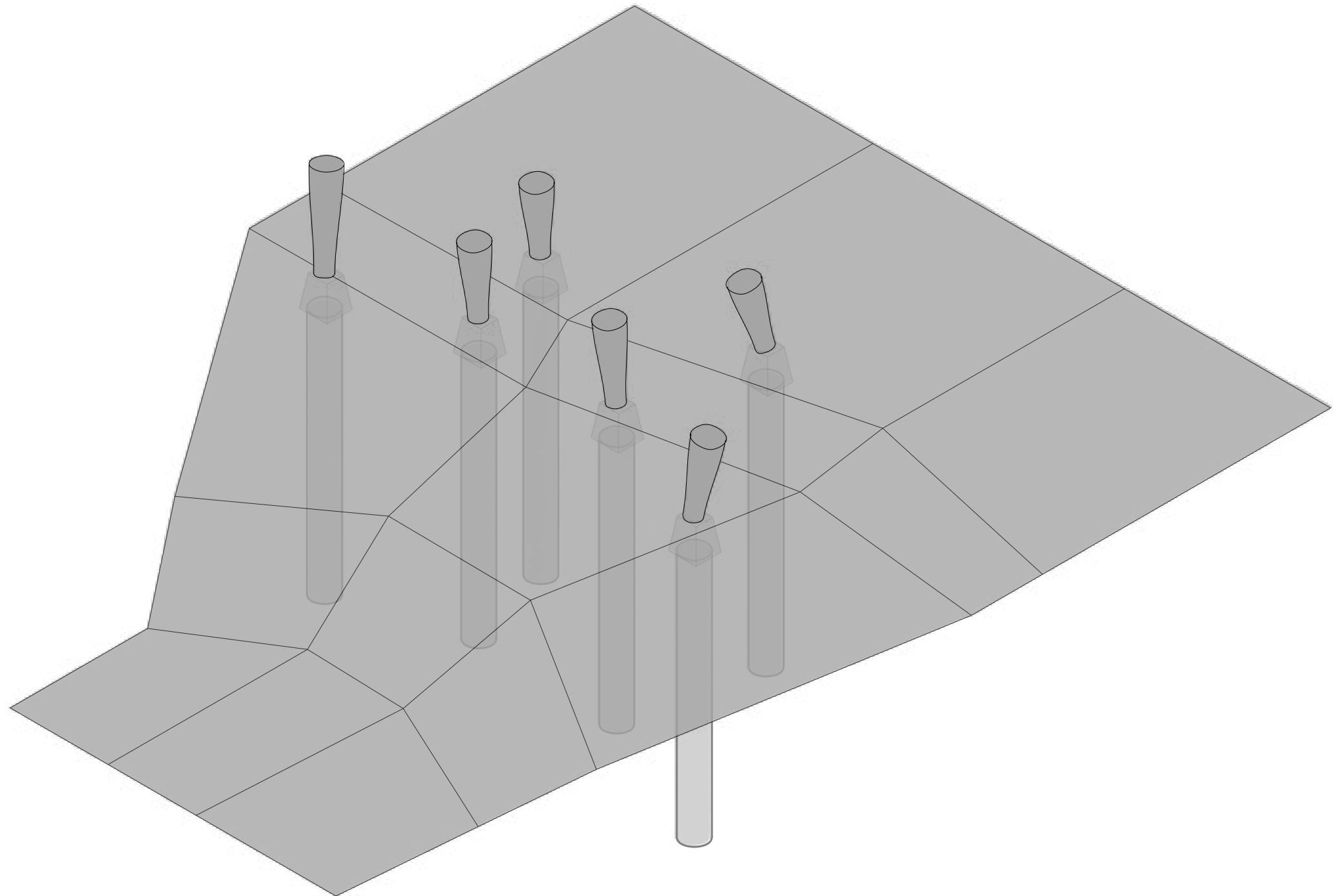
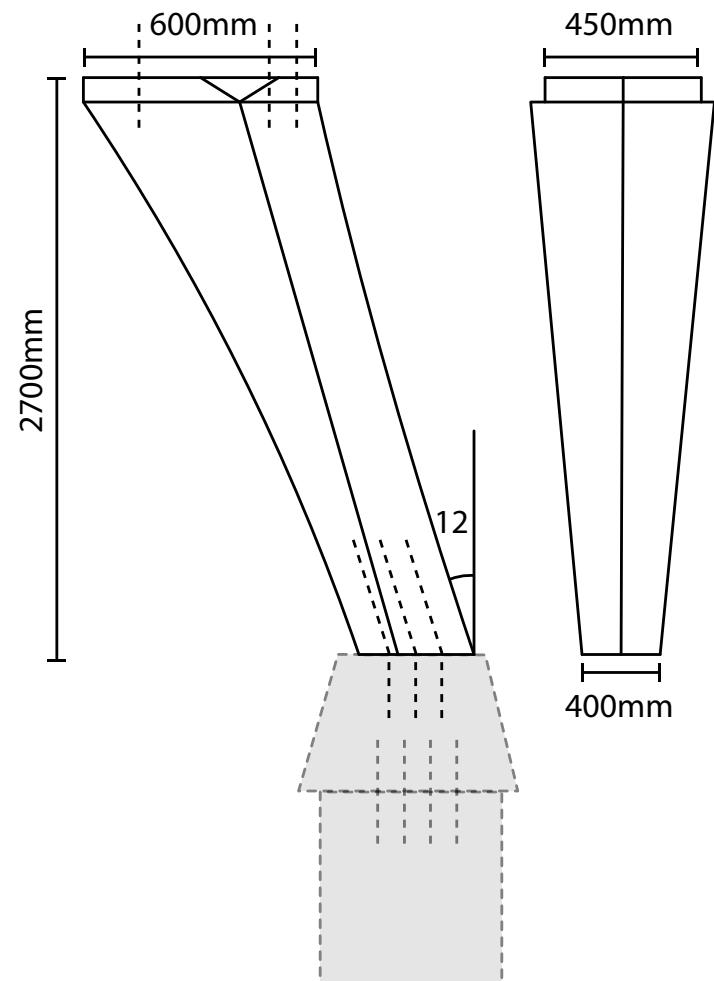


## IN-SITU FOOTINGS

(concrete, added rebar)



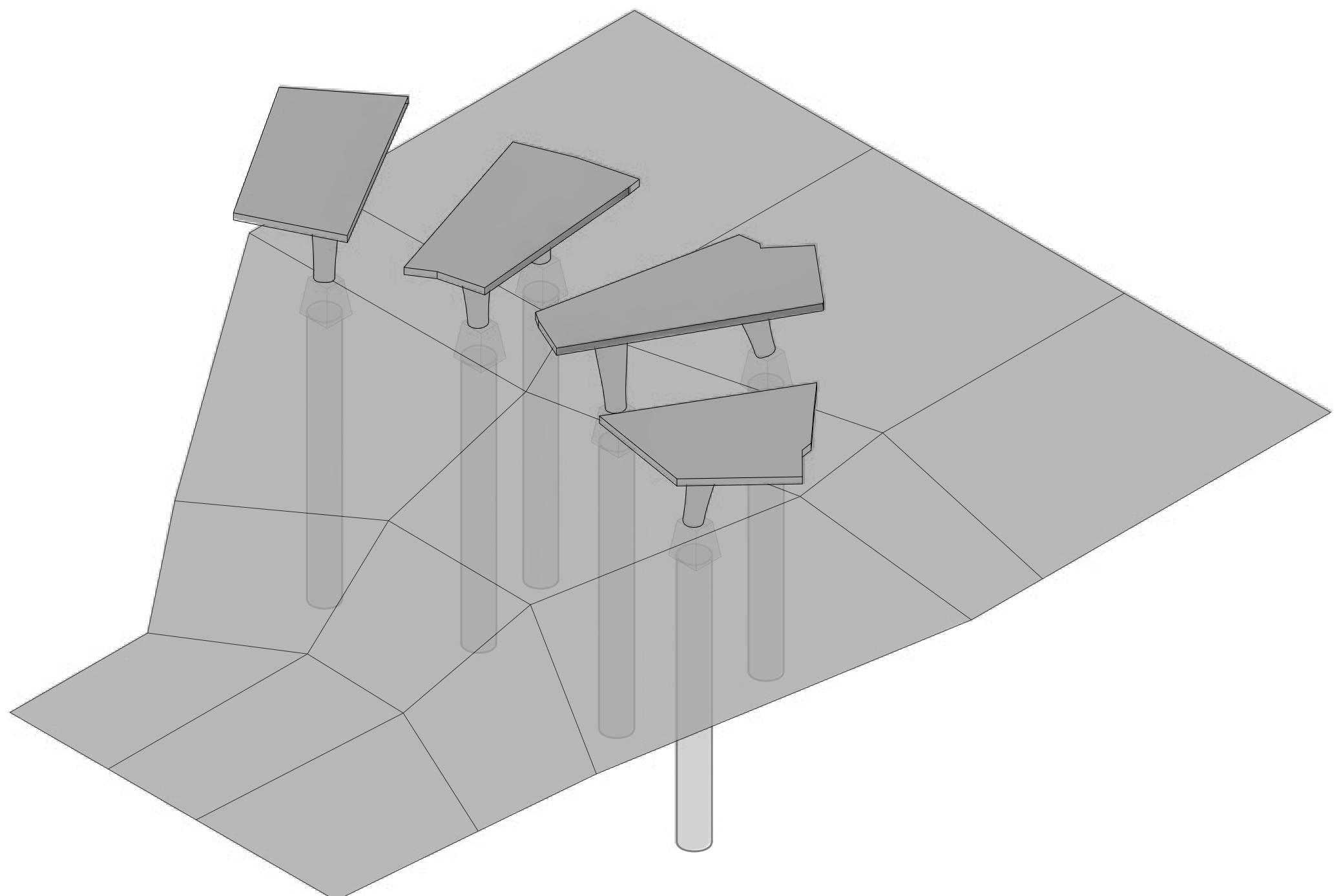
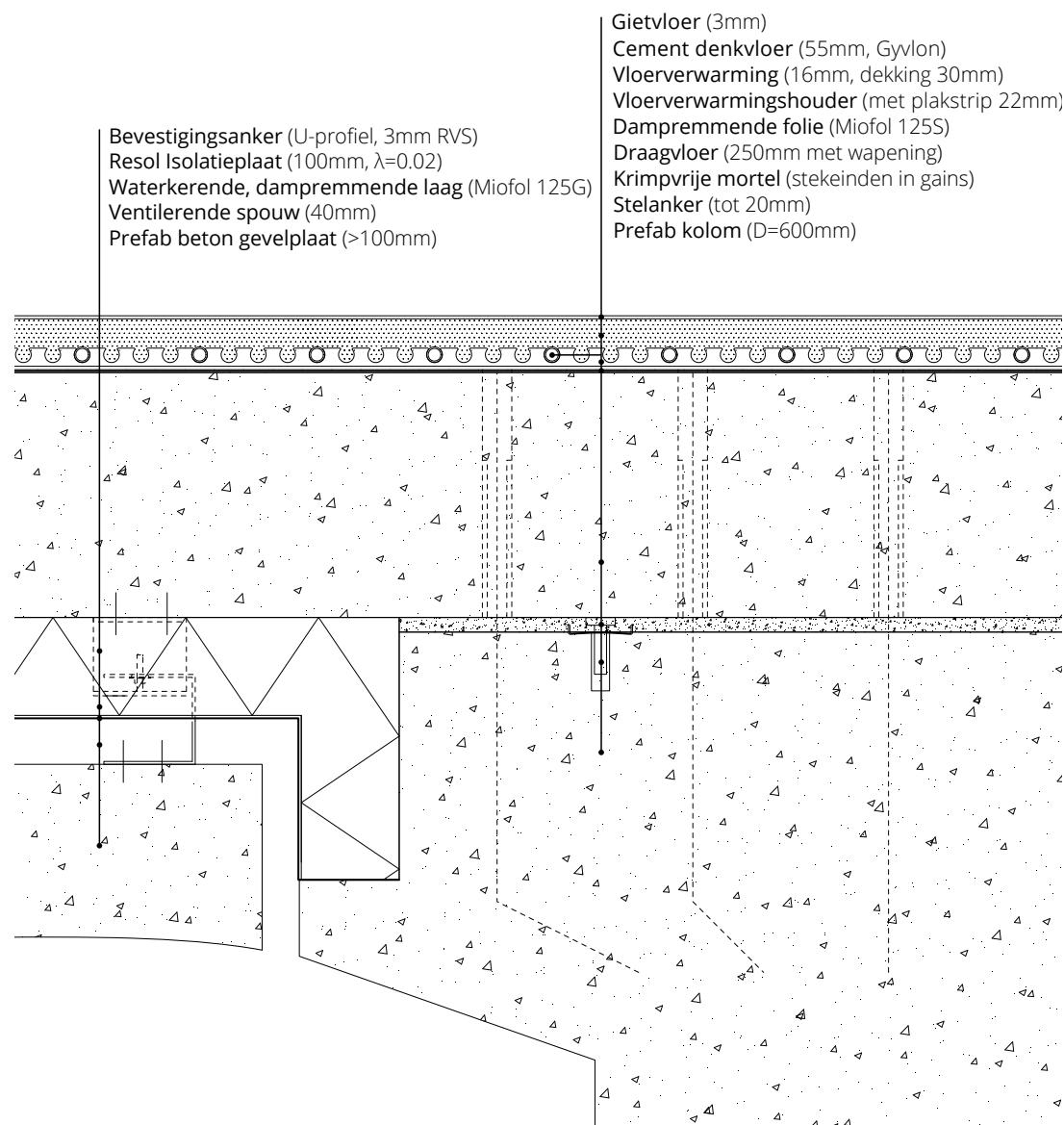
## PREFAB COLUMNS



## REINFORCED PREFAB FLOOR PLATES

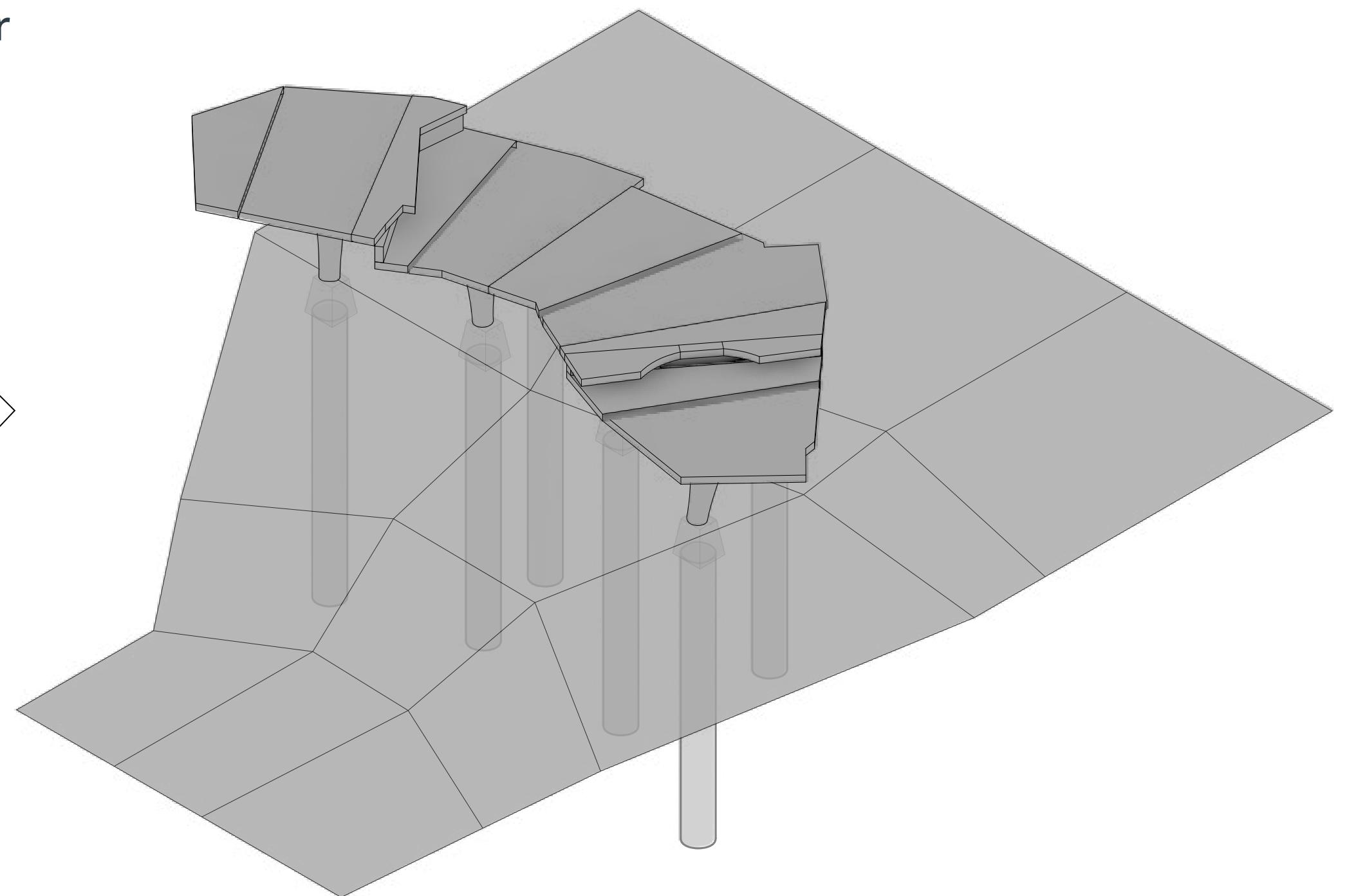
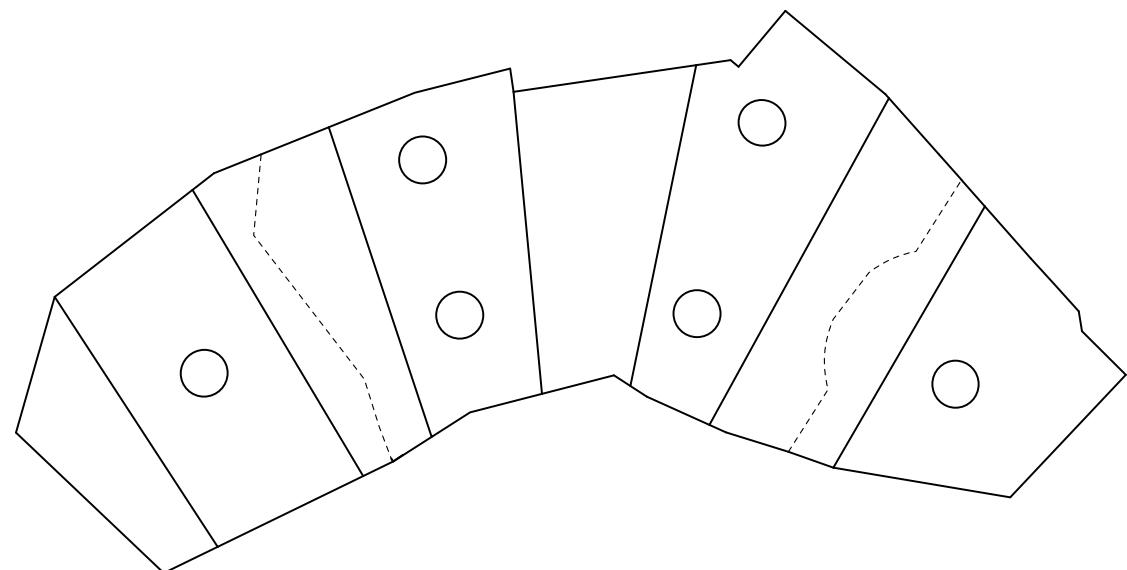
(max dim: 4x12x0,25m)

moment resisting connections  
(using non-shrink grout)

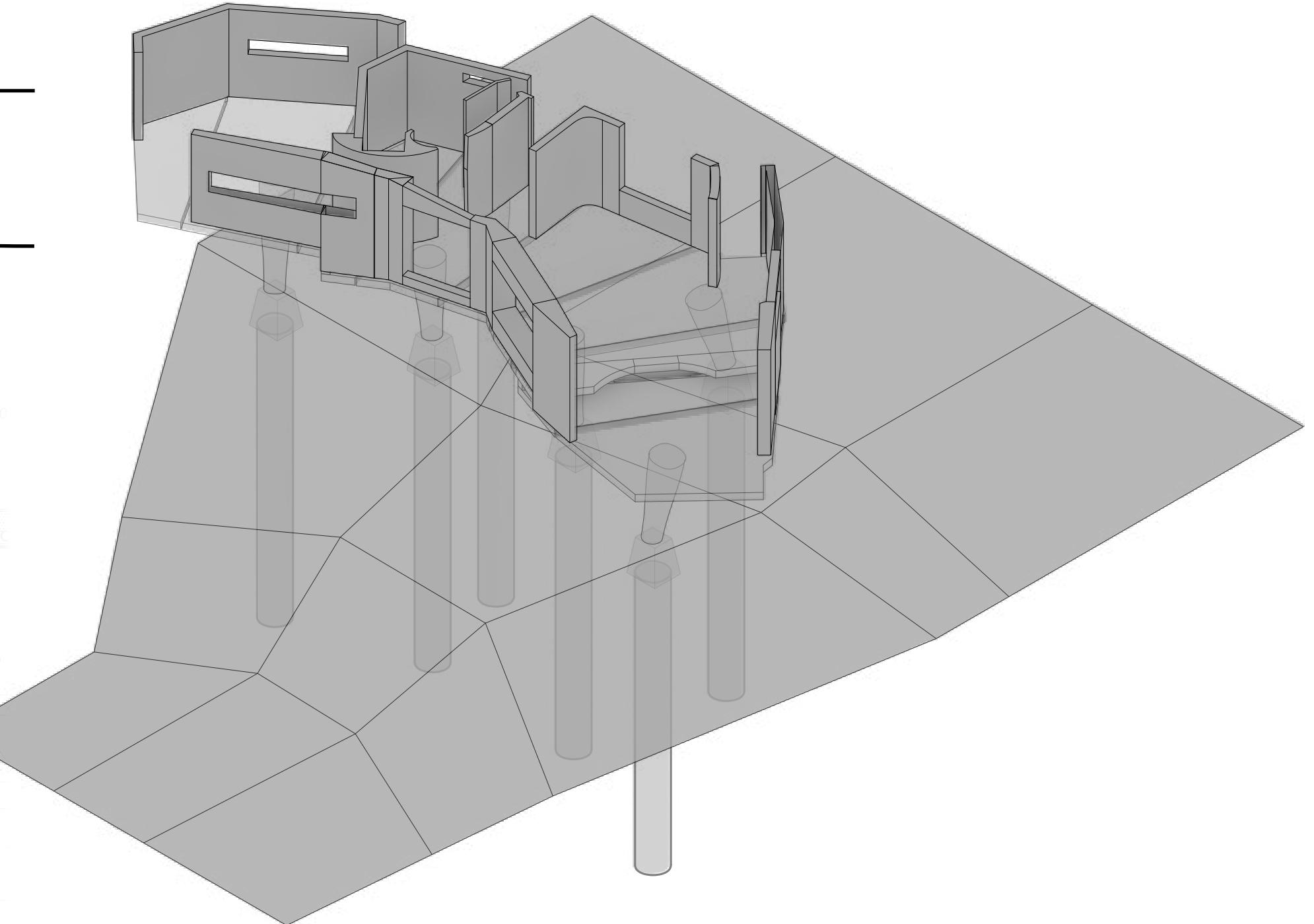
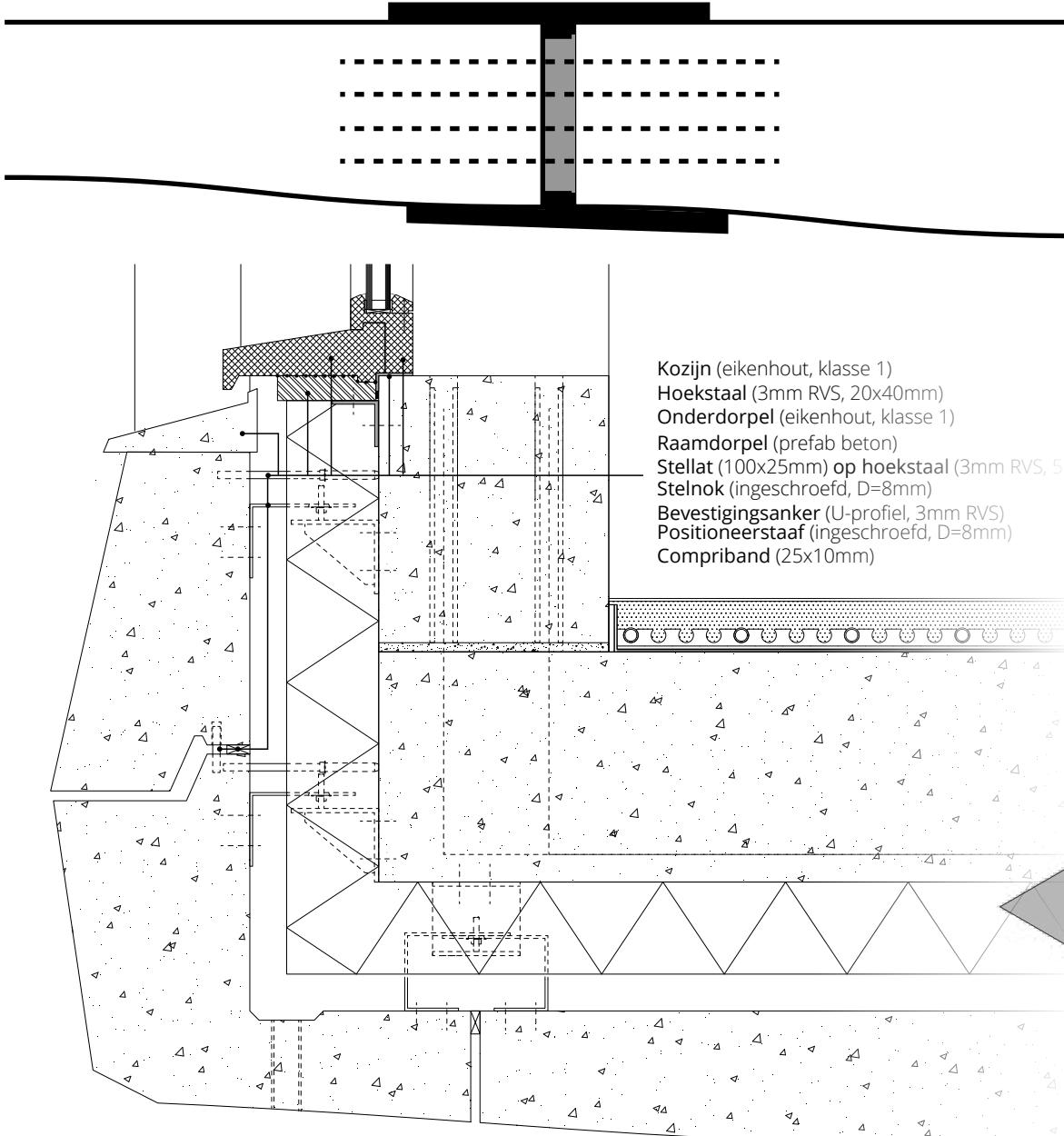


**REINFORCED PREFAB FLOOR PLATES**

(max dim: 4x9x0,25m) optimized for  
standard truck size (4,2x2,2x12m)

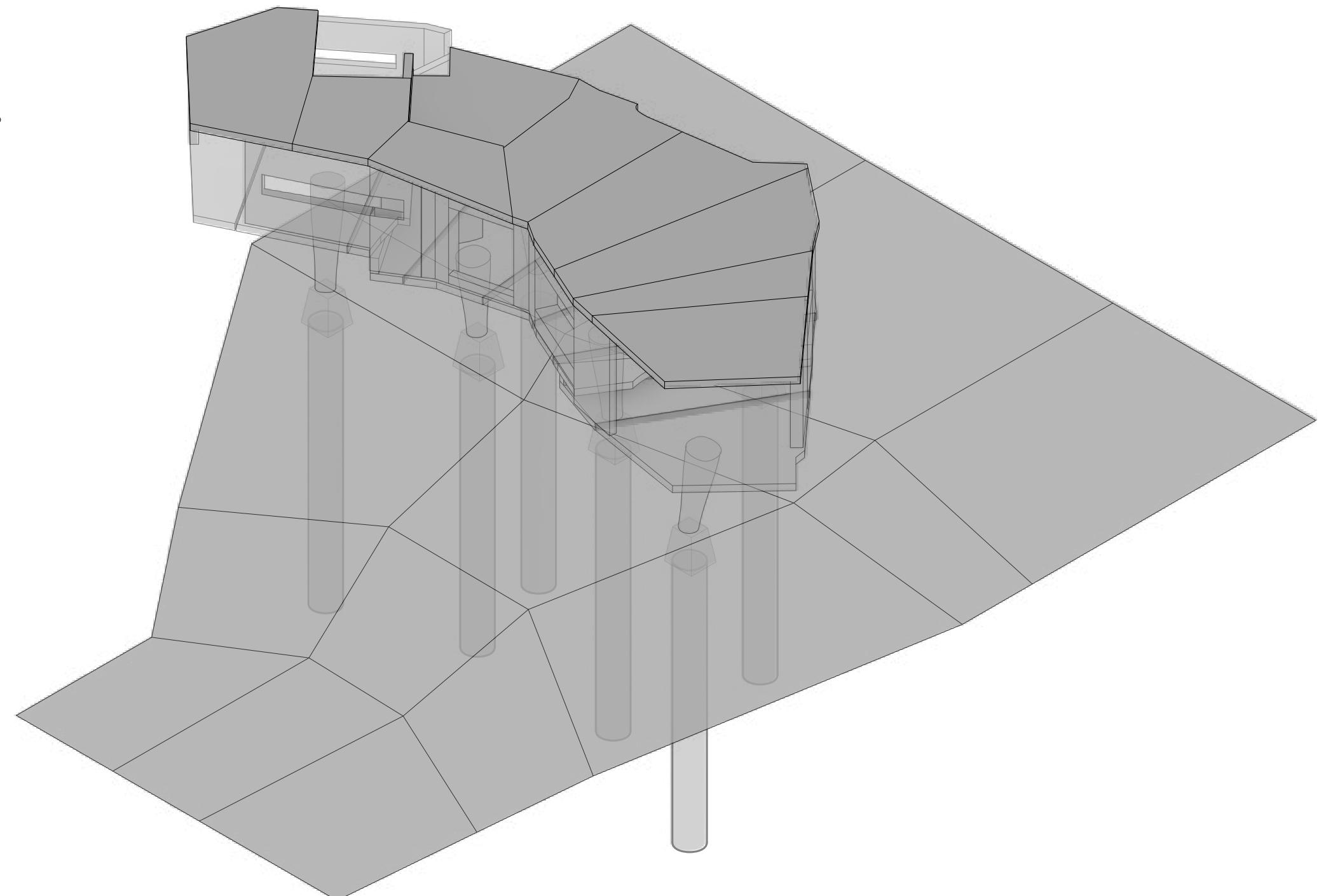
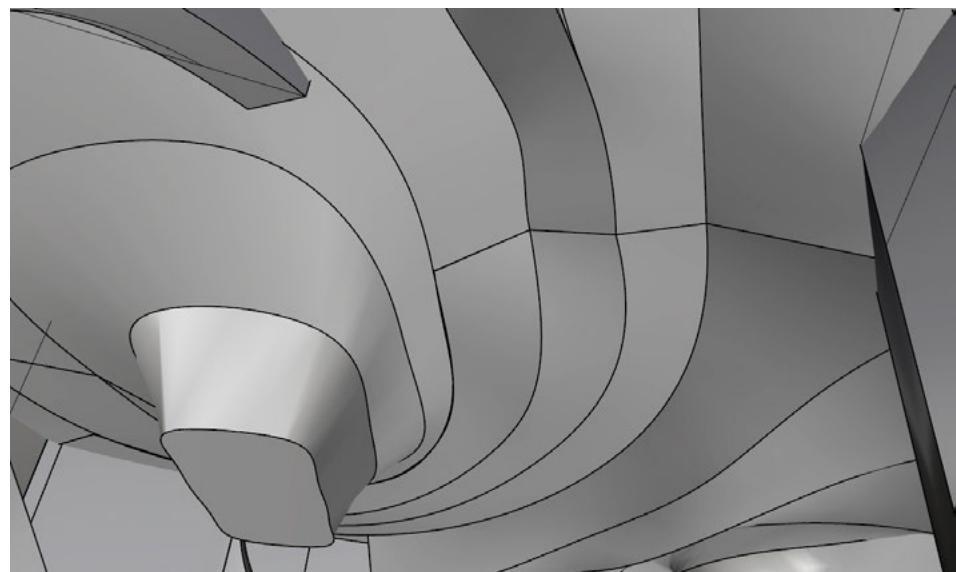
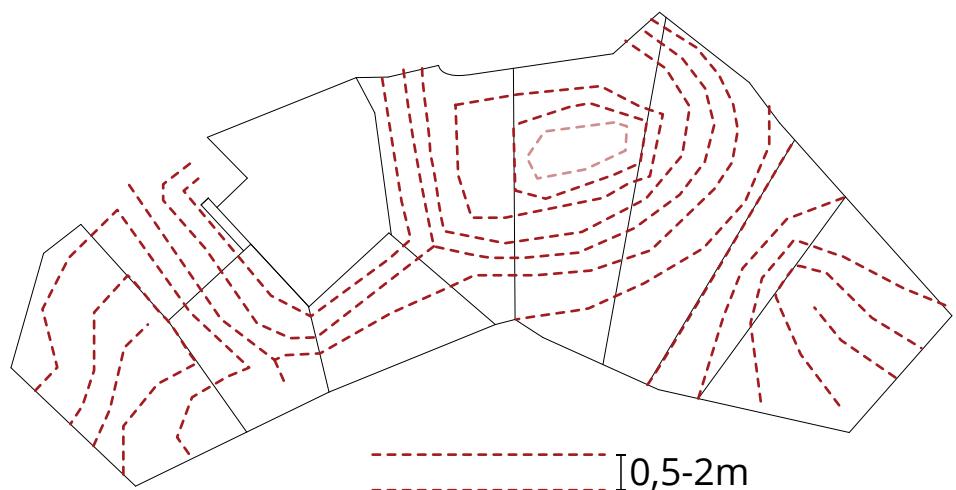


## REINFORCED PREFAB WALLS (H=3m, D=250mm)



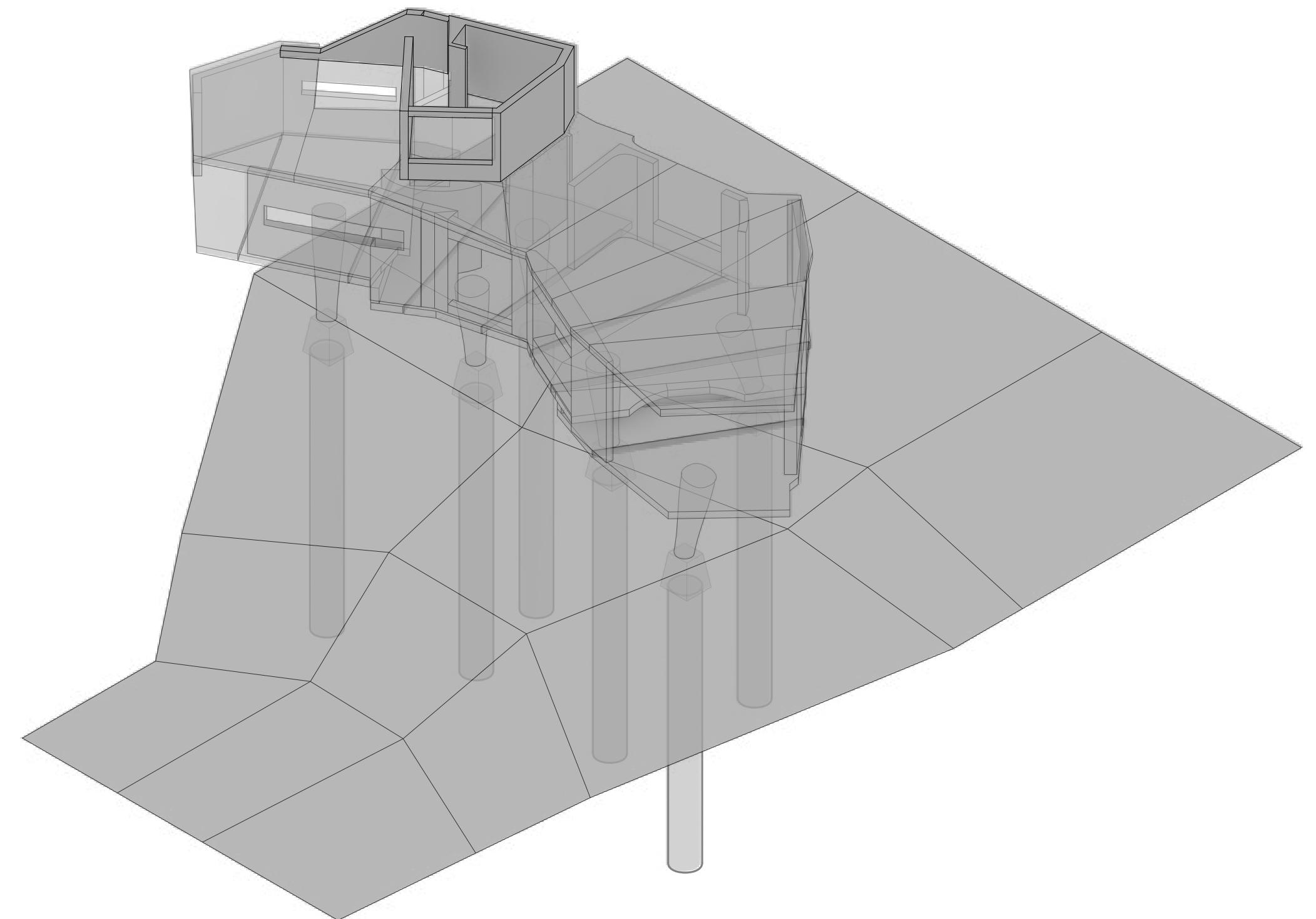
## REINFORCED PREFAB ROOF

(max dim: 4x9x0,25m) with pattern  
on bottom related to spatial layout.

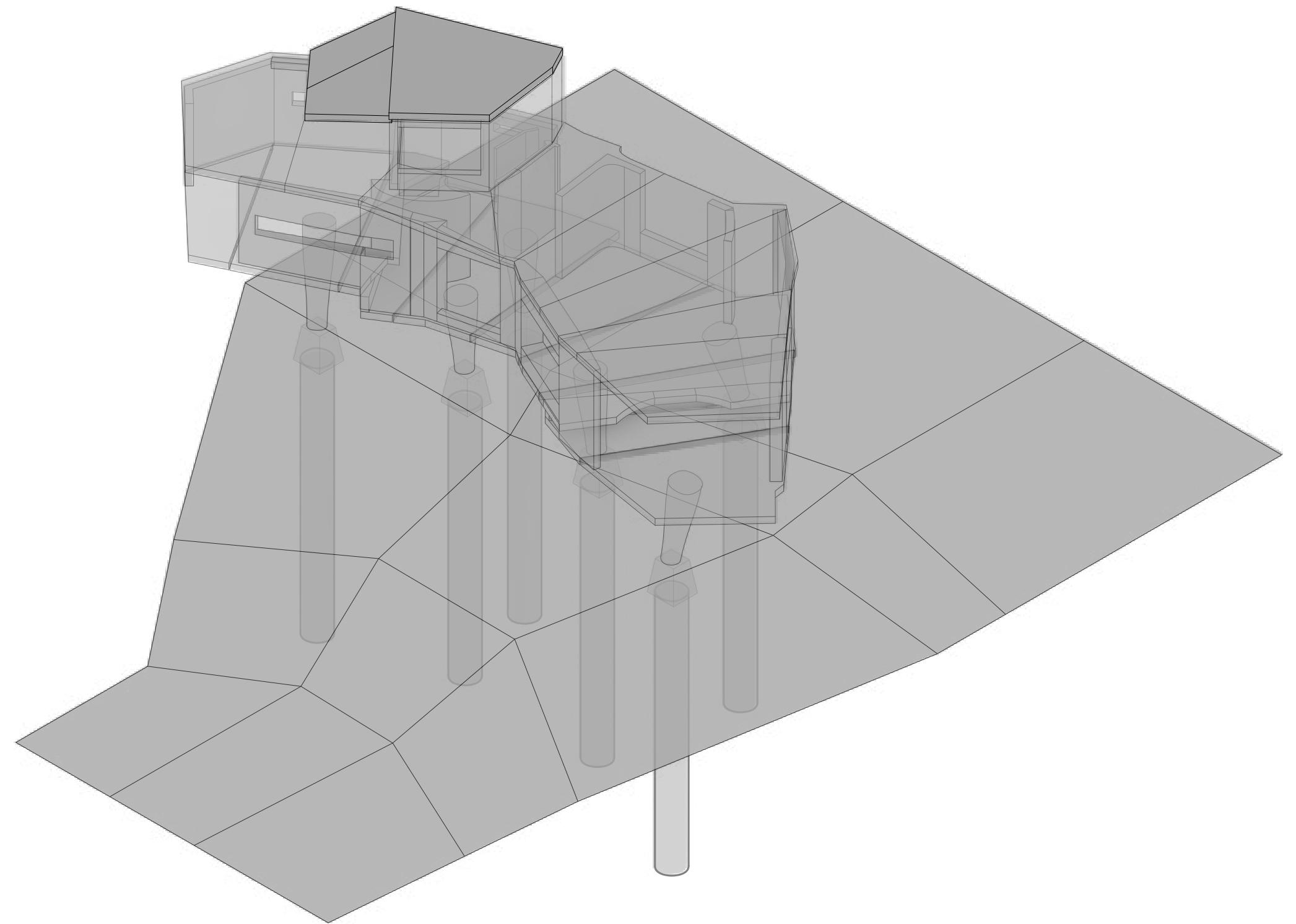
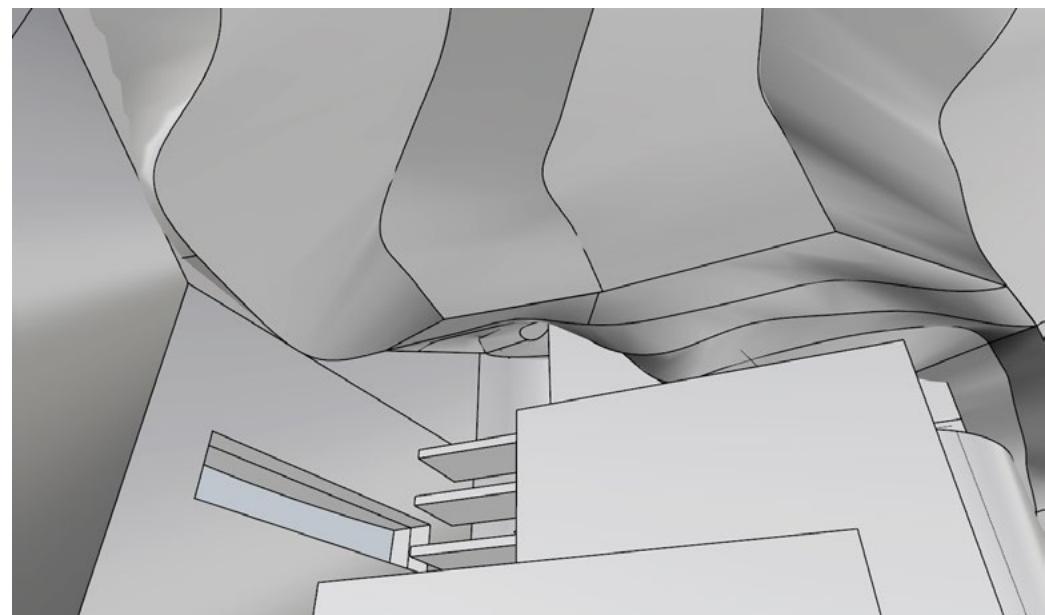


## REINFORCED PREFAB WALLS

(H=3m, D=250mm)



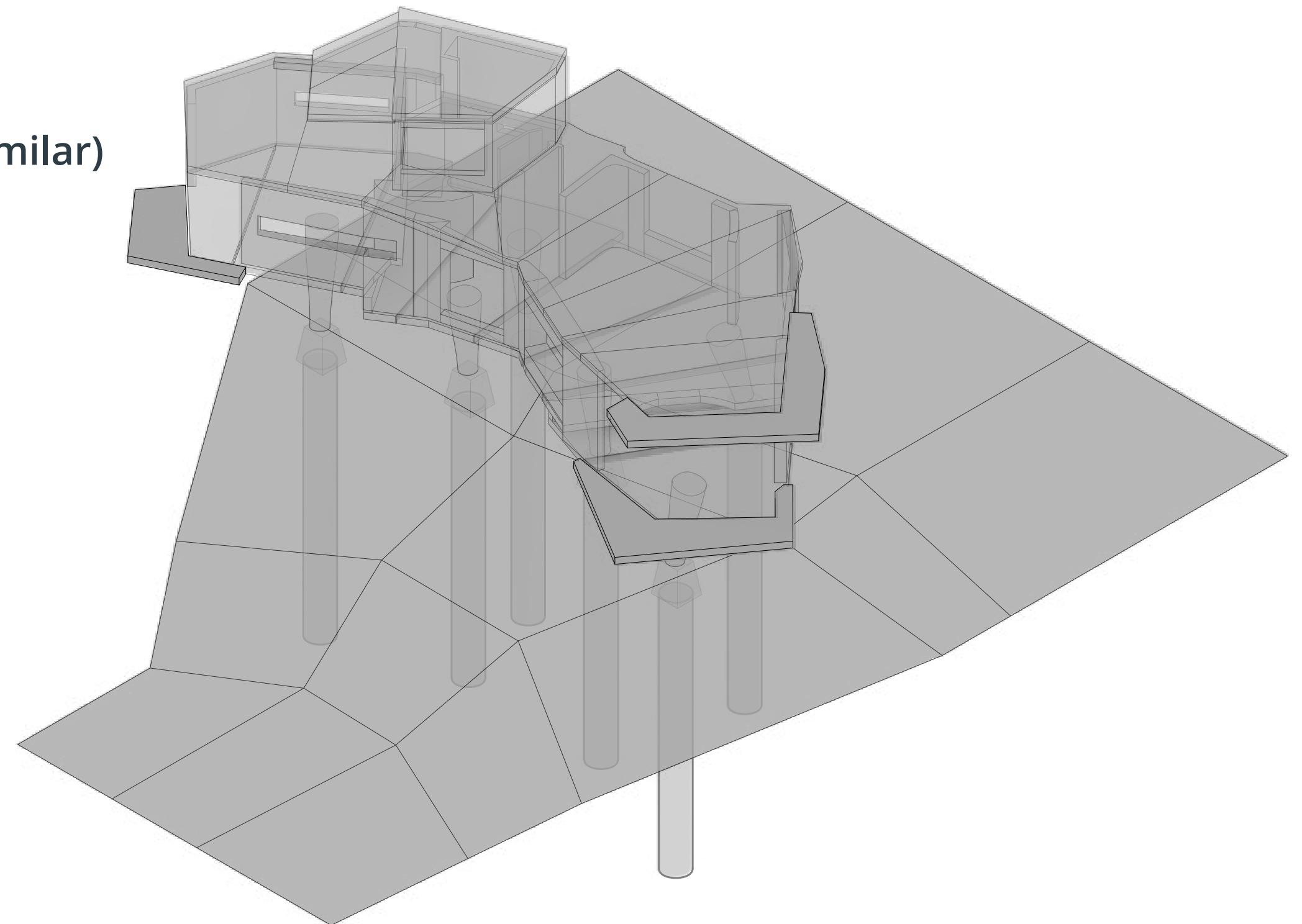
## REINFORCED PREFAB ROOF with pattern (D=250mm)



## PREFABRICATED BALCONIES

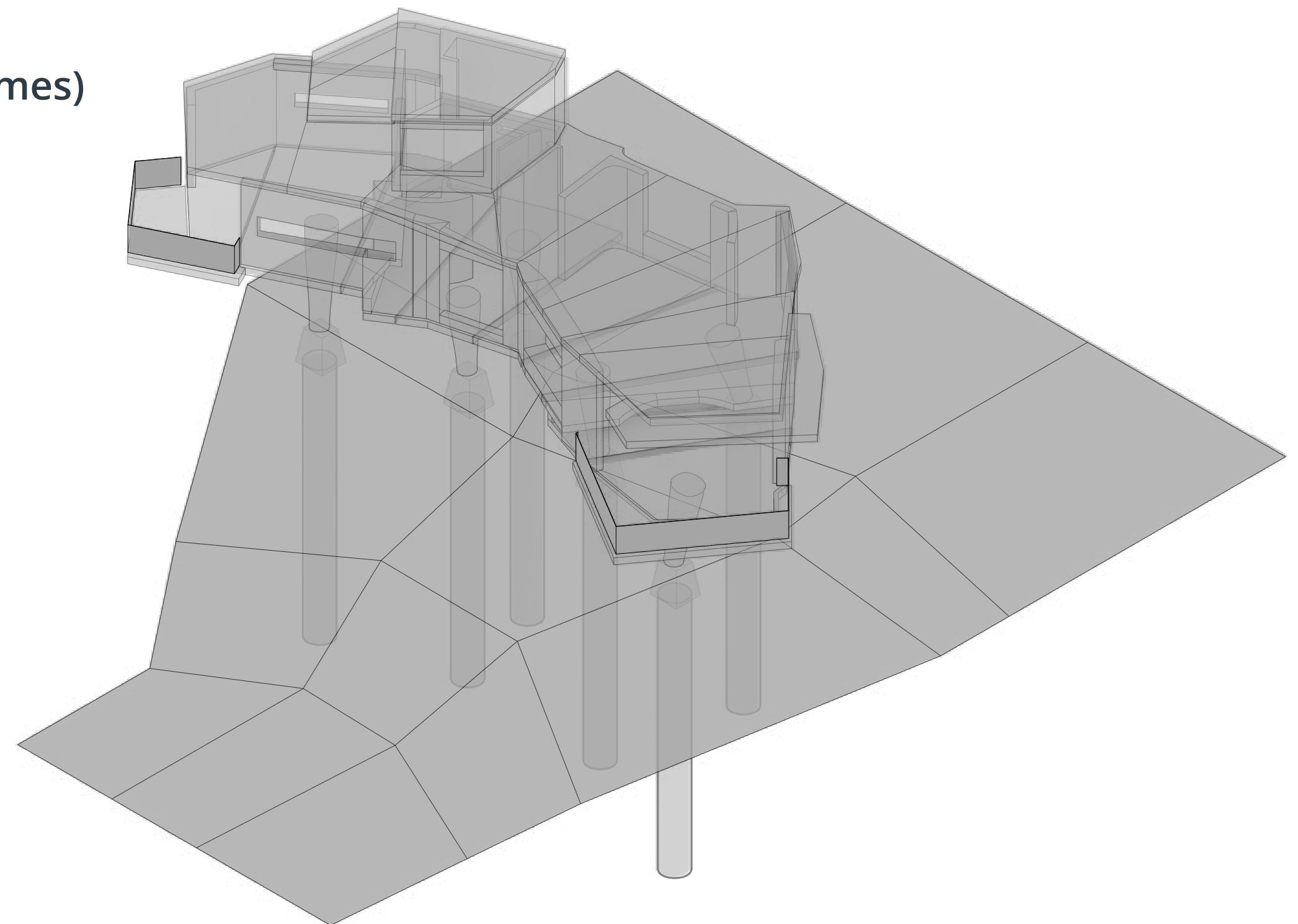
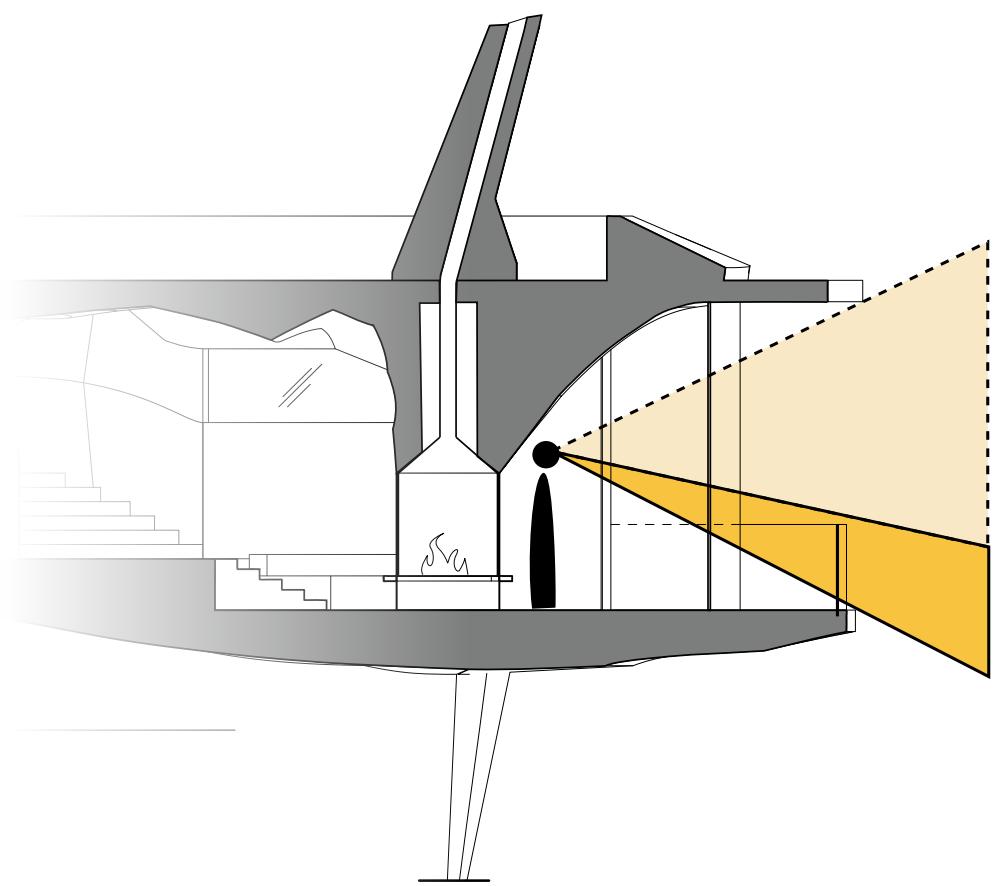
+ CANTILEVER

(with Isokorf thermal bridging or similar)



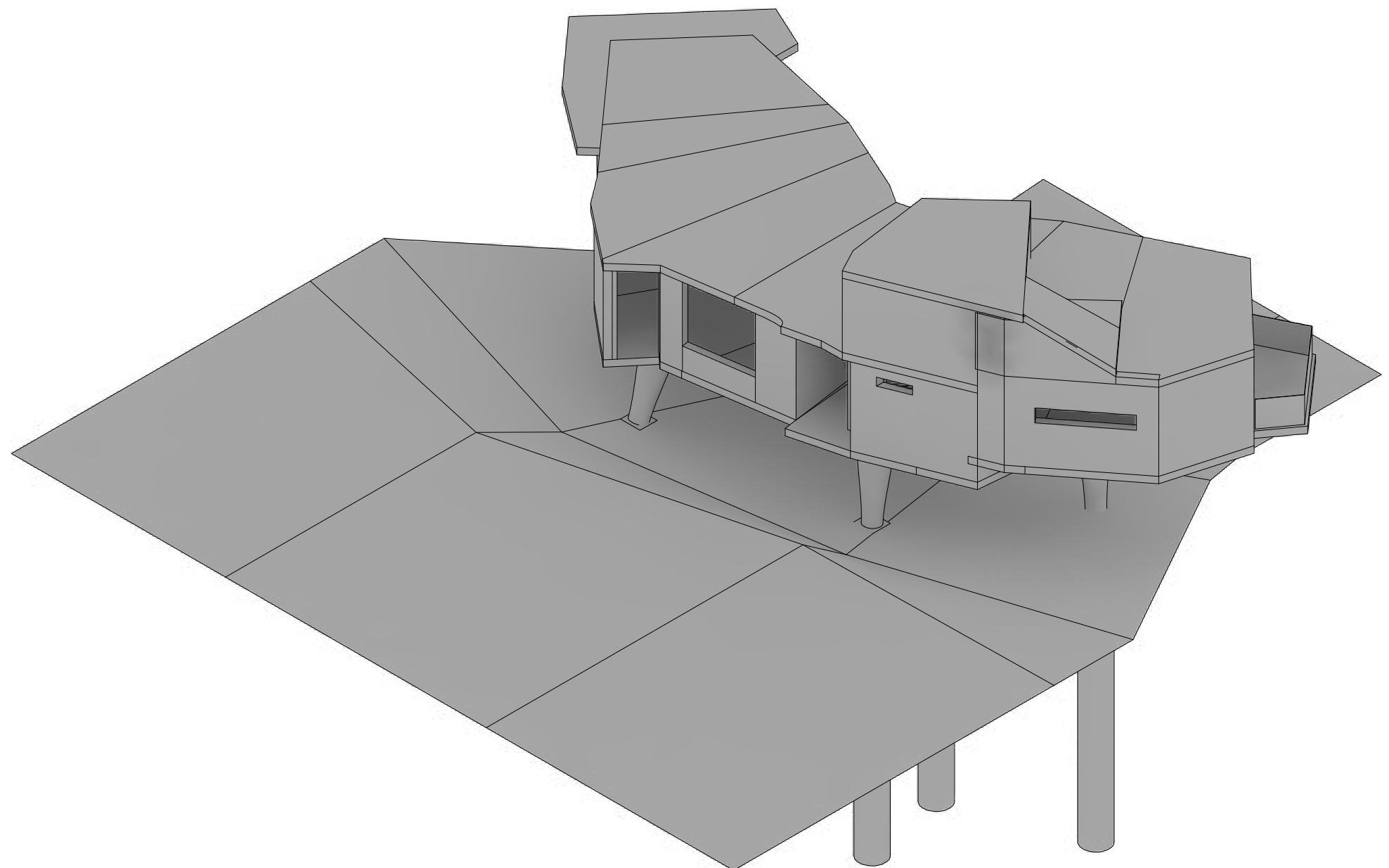
## GLASS BALUSTRADES

(for enhanced view, in recessed frames)

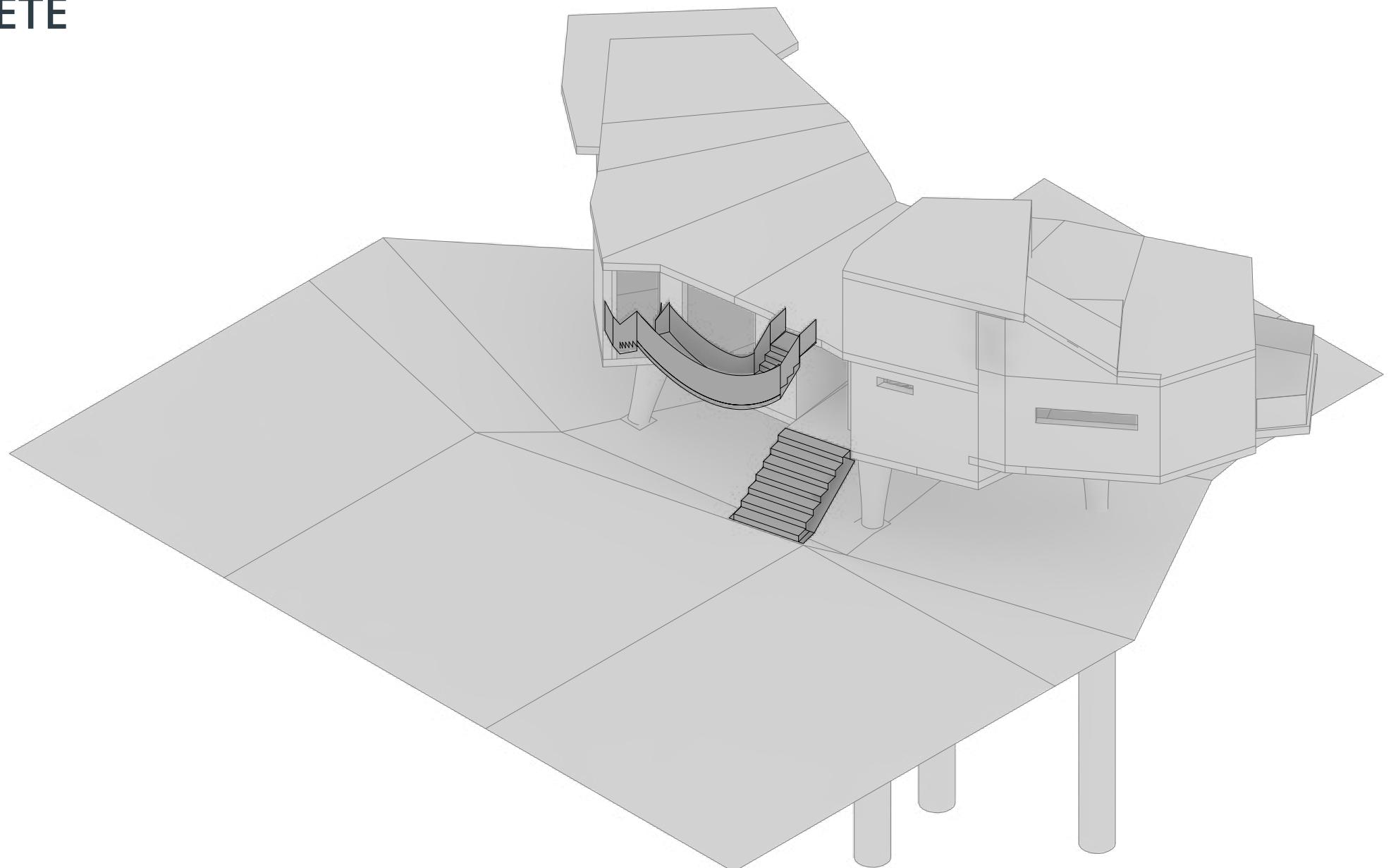


## CHAPTER 3. DESIGN

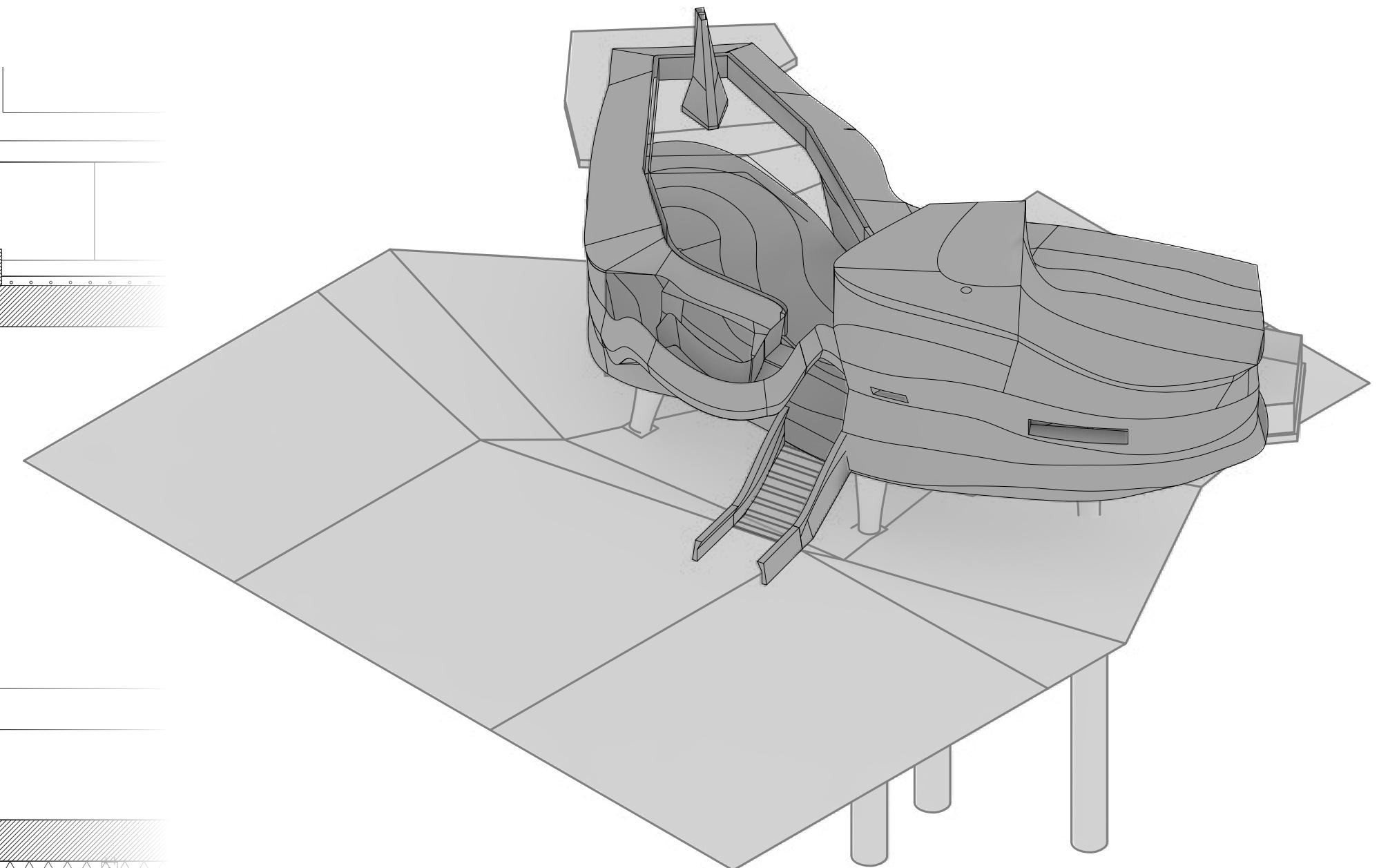
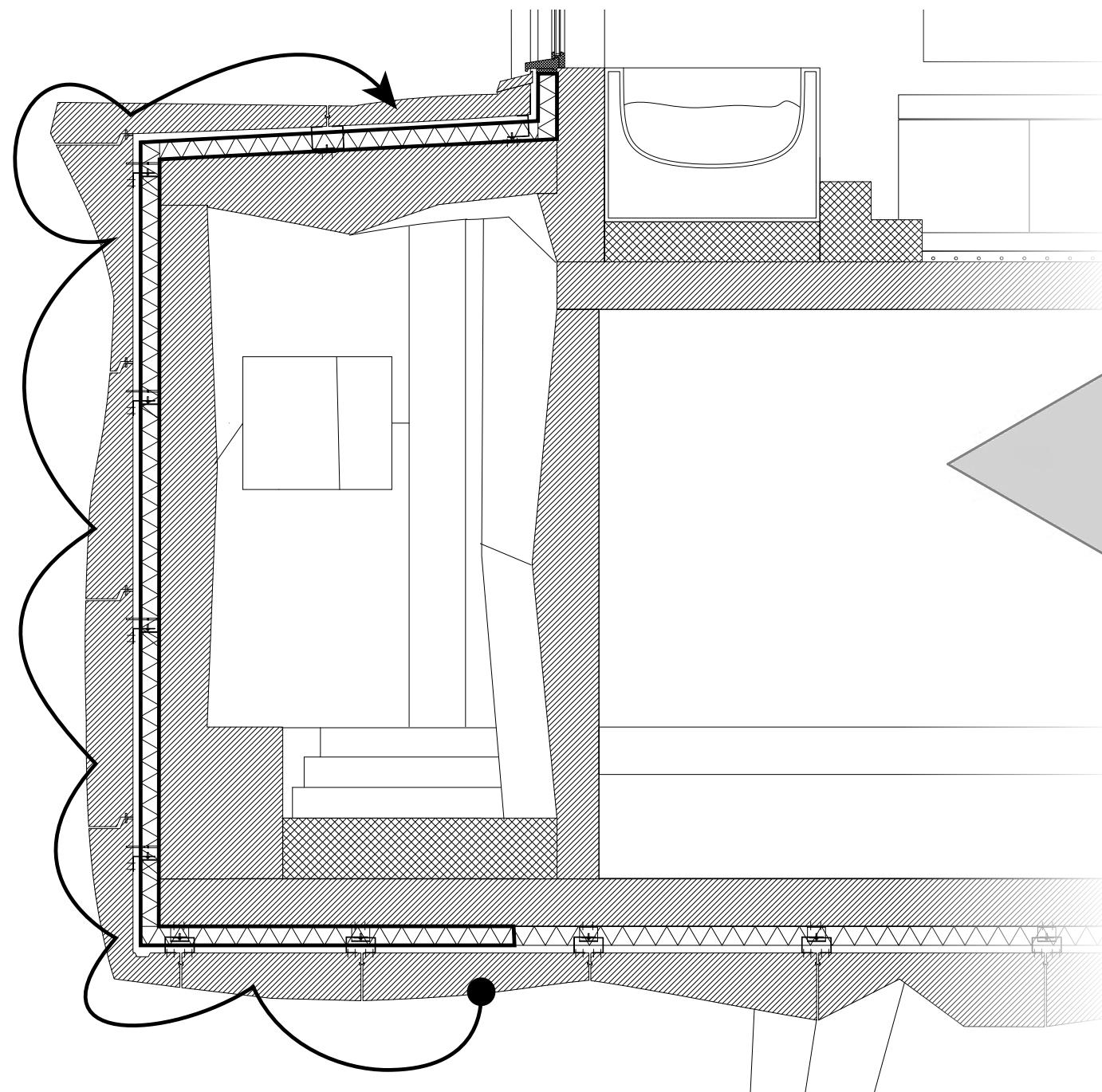
### CONSTRUCTION METHOD



## CONCRETE ENTRY STAIR & STEEL EXTERIOR STAIR WITH CONCRETE PANELS

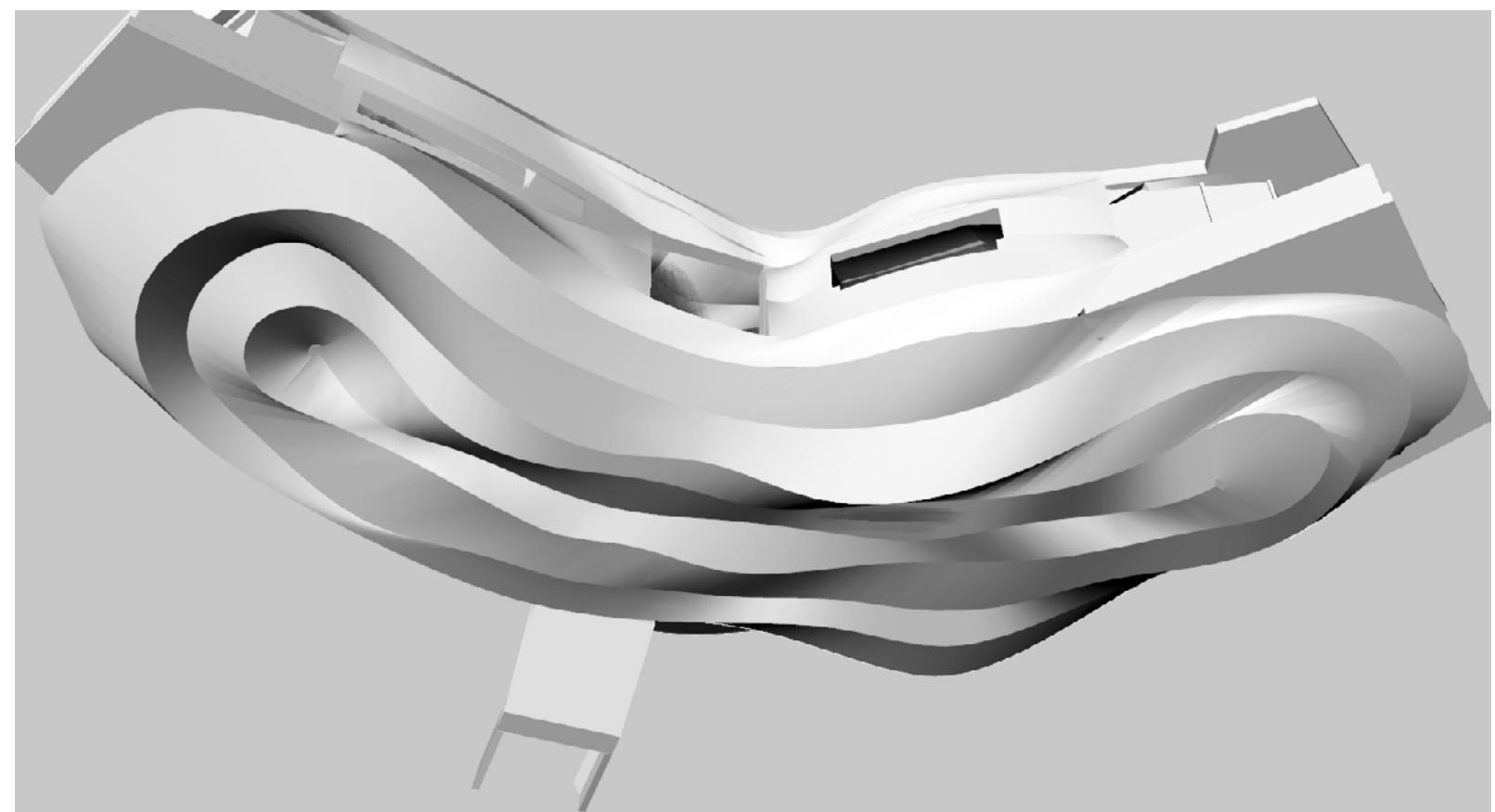
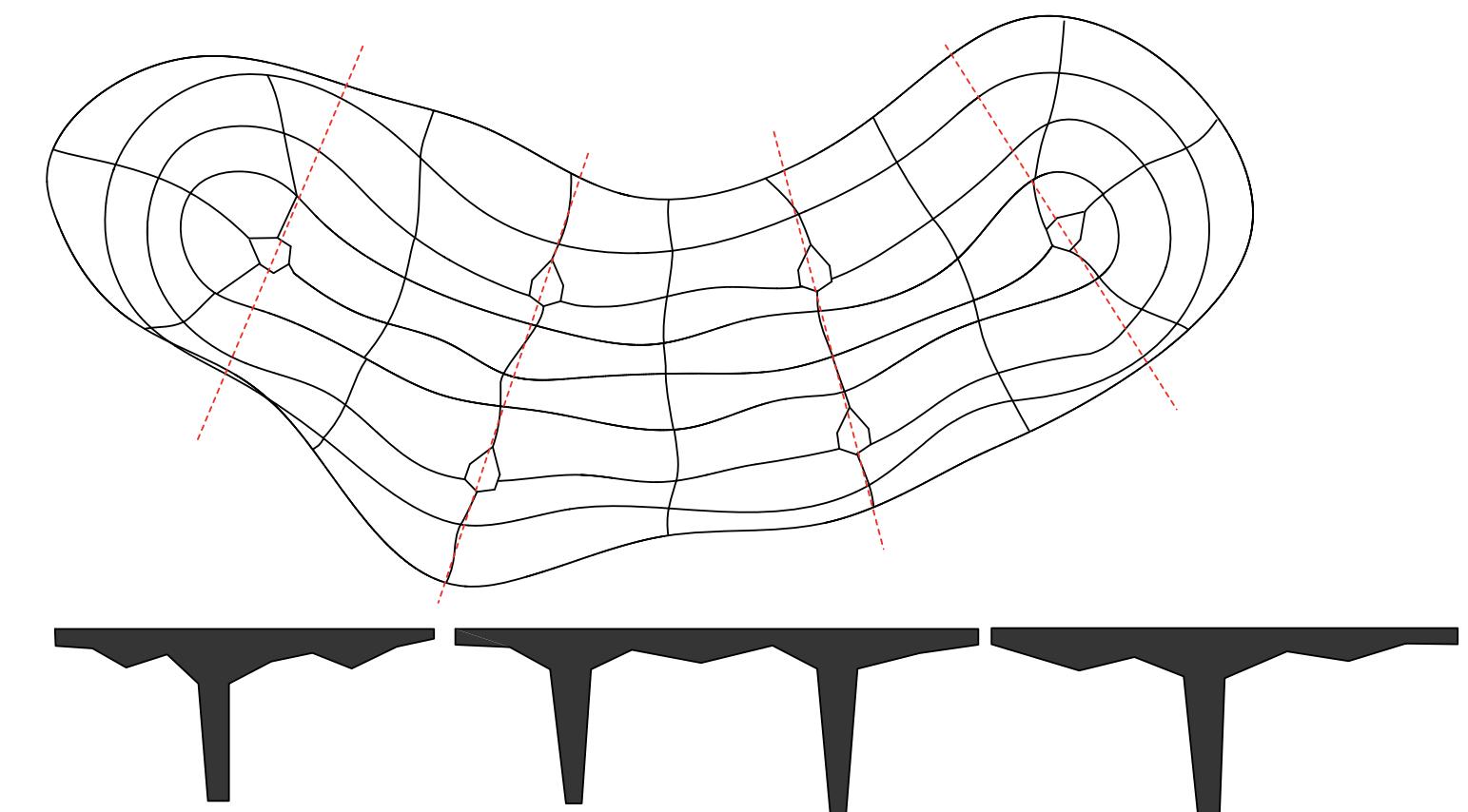
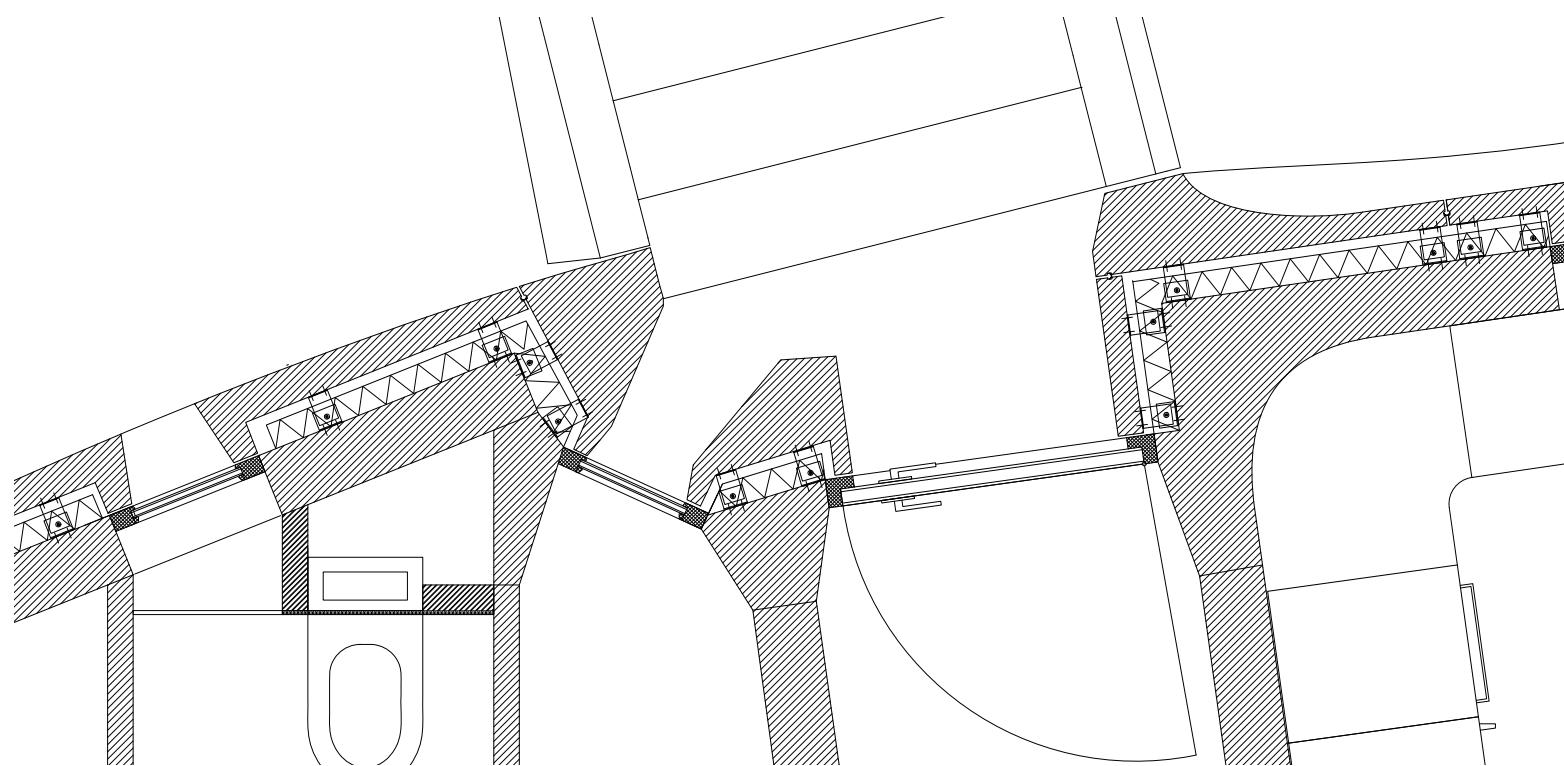


## INSULATION, WATERPROOFING & PANEL PLACEMENT

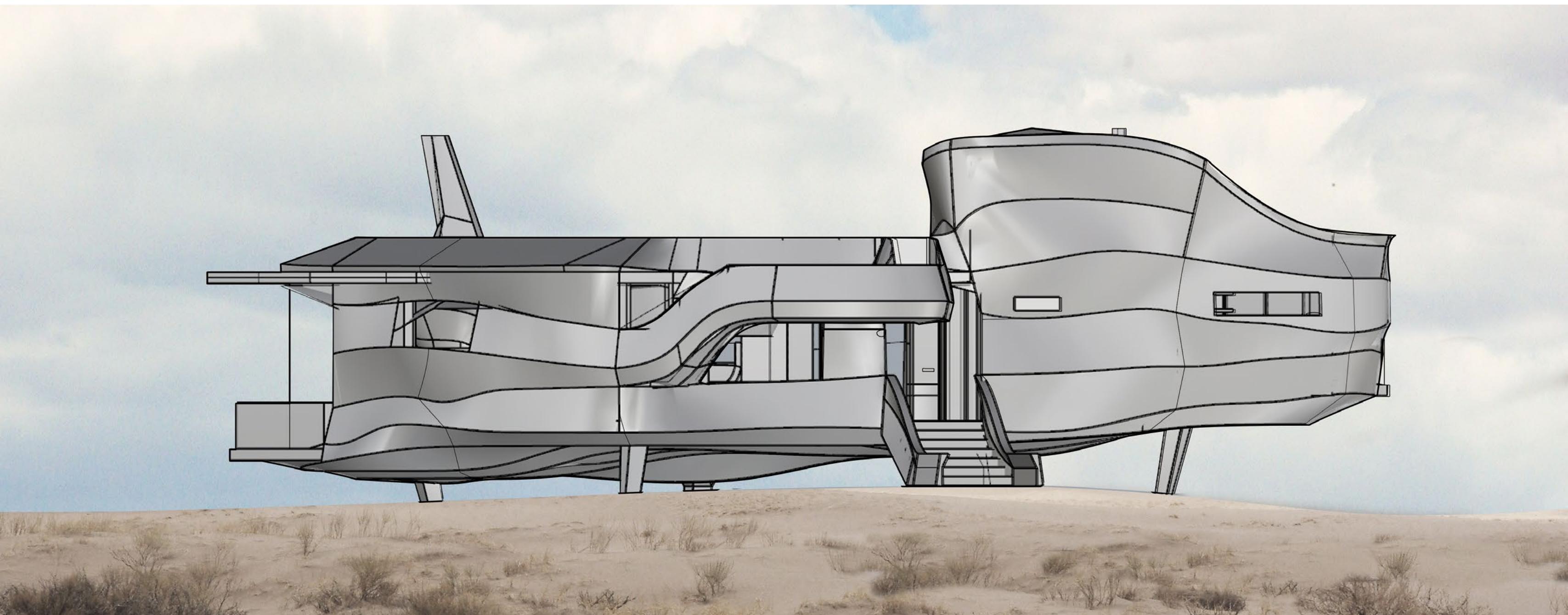


## PANEL LAYOUT

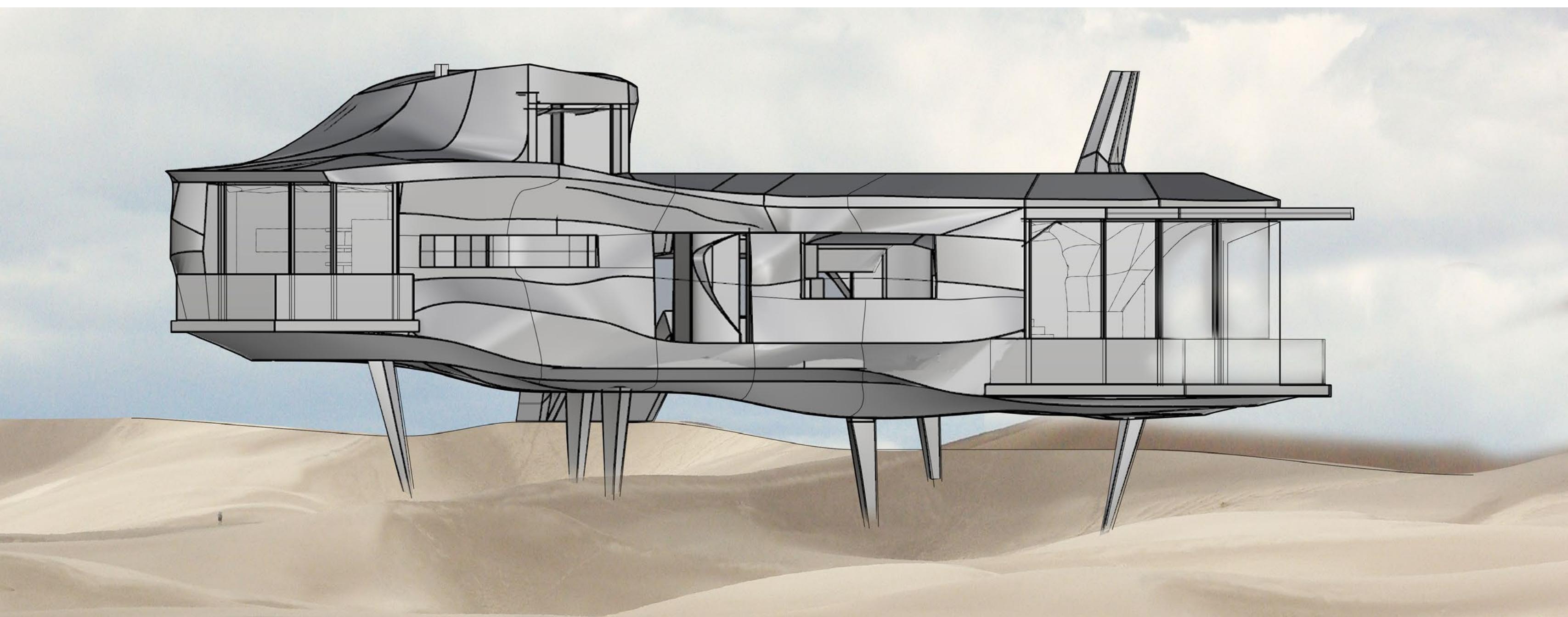
(1,2x4x0,1m but often shorter)

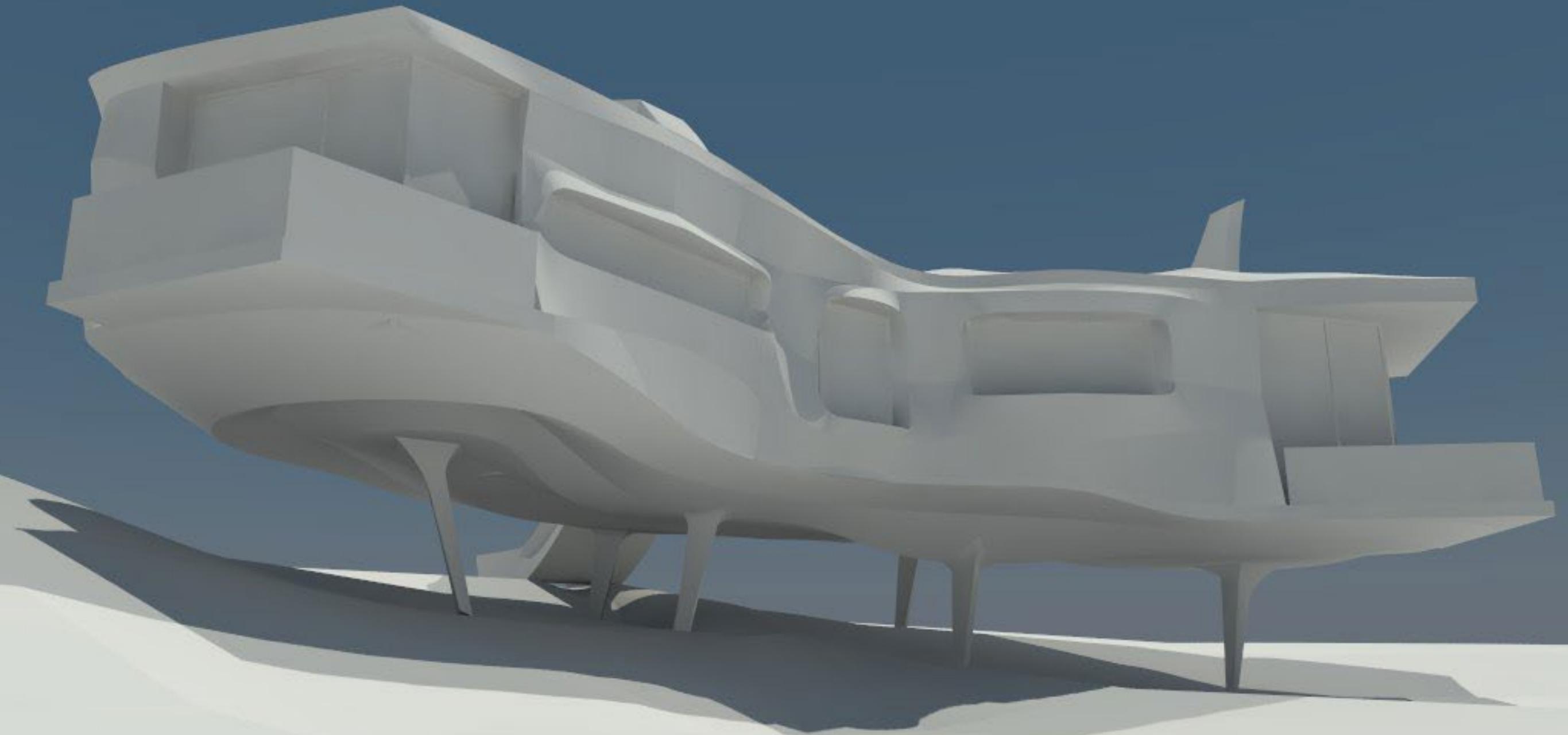


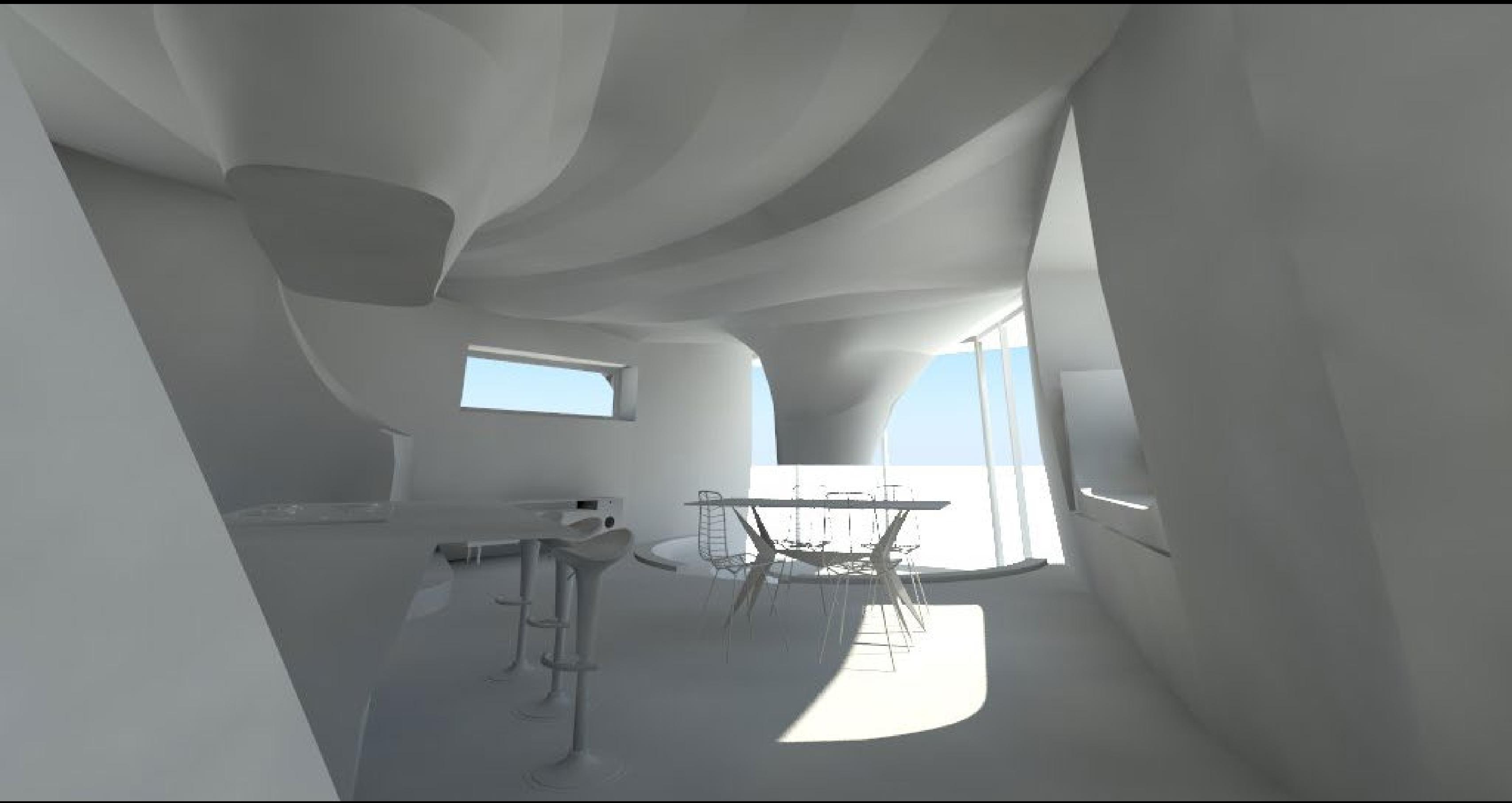
**CHAPTER 3. DESIGN**  
**ELEVATIONS**



**CHAPTER 3. DESIGN**  
**ELEVATIONS**







**THANK YOU**