



Mare Schut

Rhythms of Renewal

*exploring material cycles in
regenerative architecture*

STUDIO ASSIGNMENT



DRIVING CONCERNS



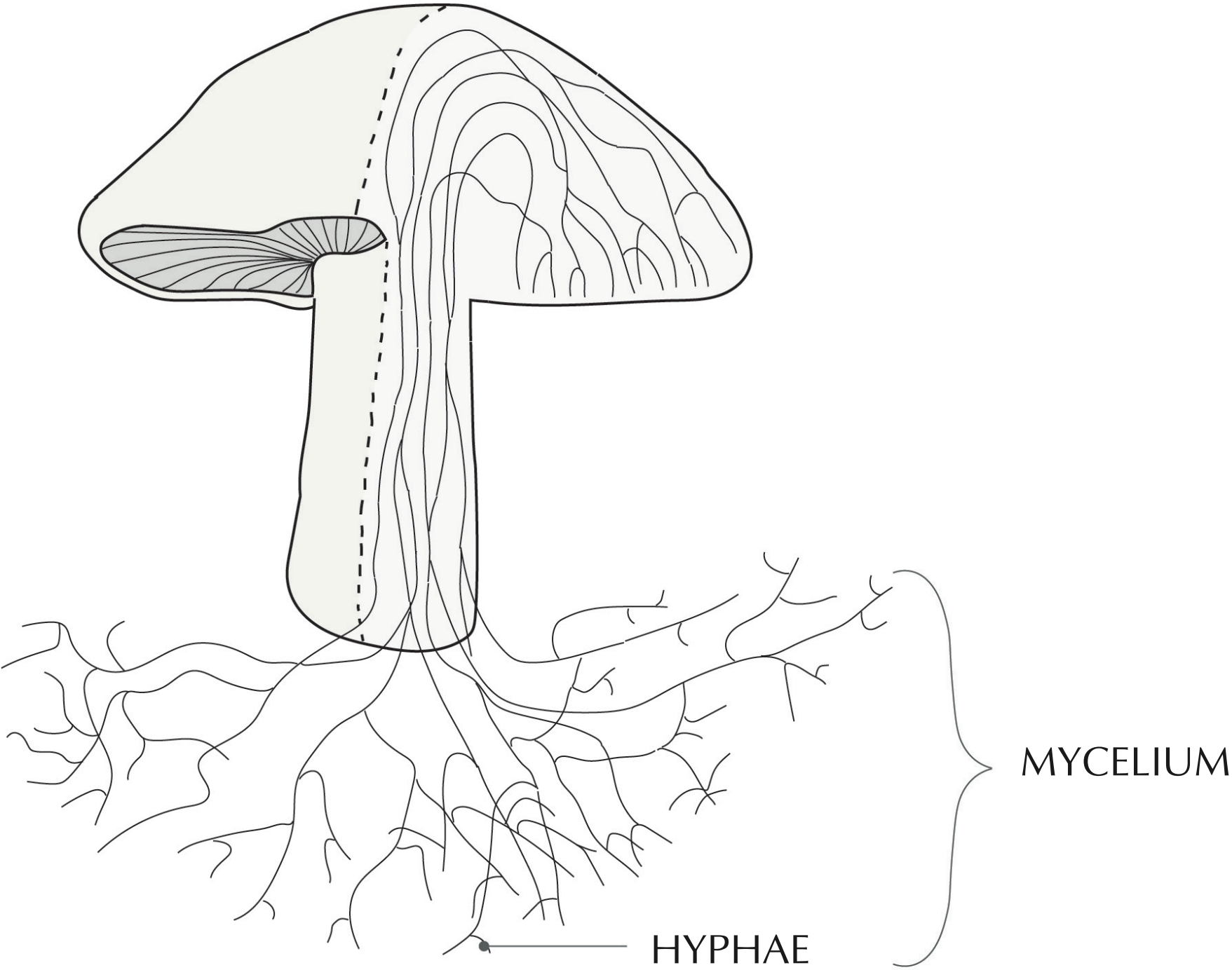
**RECONSIDERING
MATERIAL USE**

DURABILITY OF MATERIALS ↔ INTENDED LIFESPAN

THE POTENTIAL OF MYCELIUM

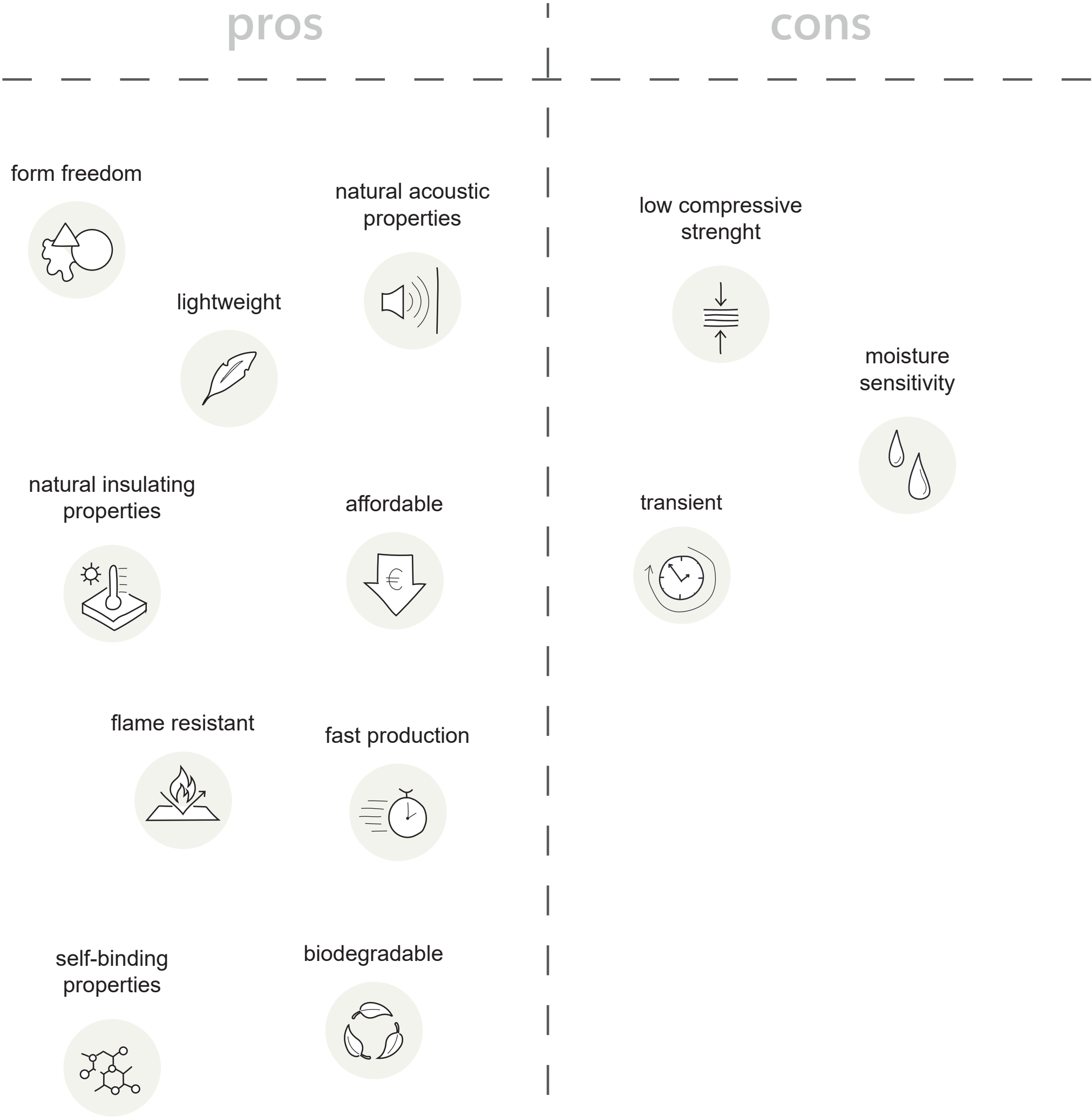


**WHAT IS
MYCELIUM ?**



LIFECYCLE & PRODUCTION

MYCELIUM



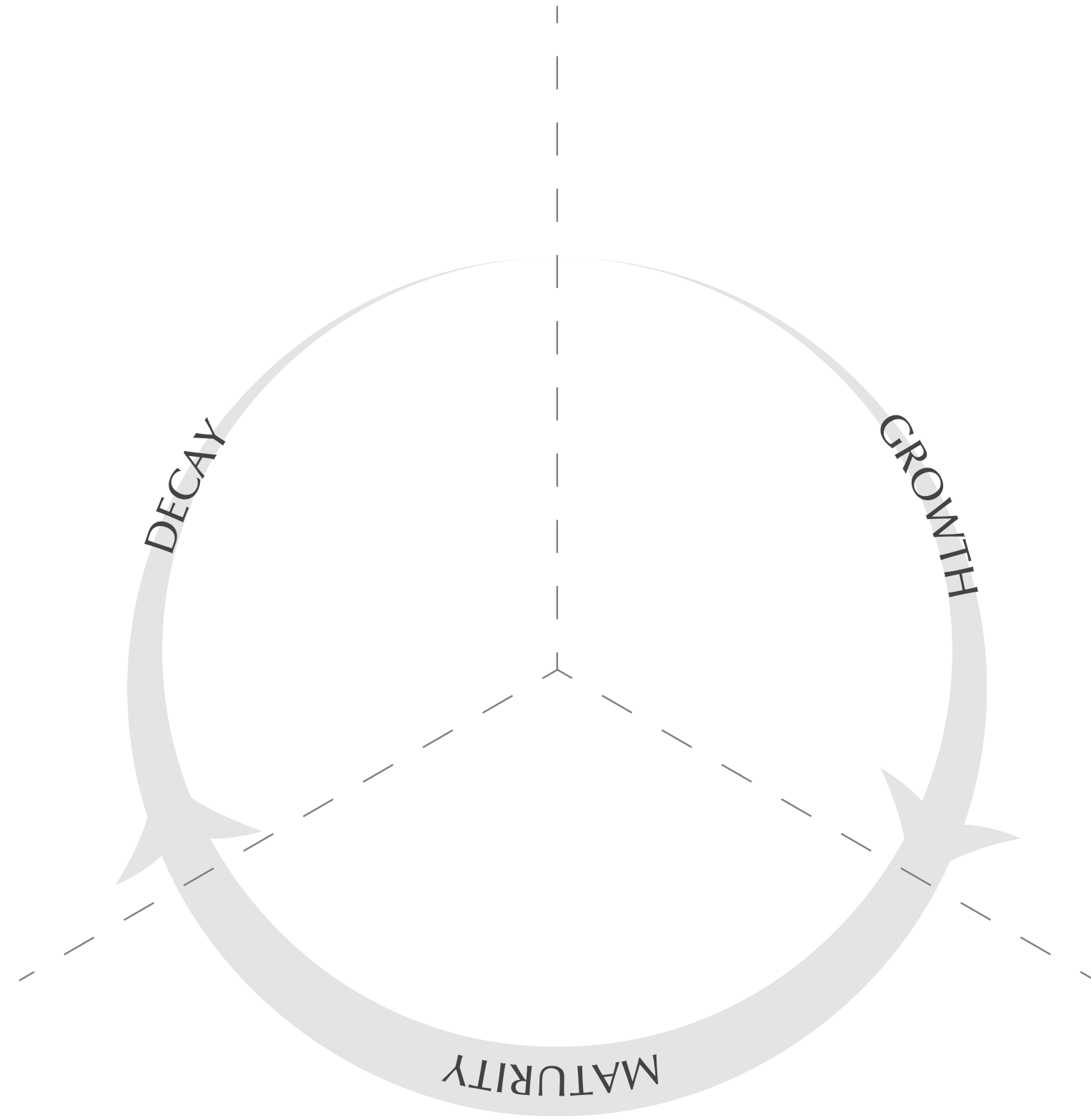
REIMAGINING ARCHITECTURE



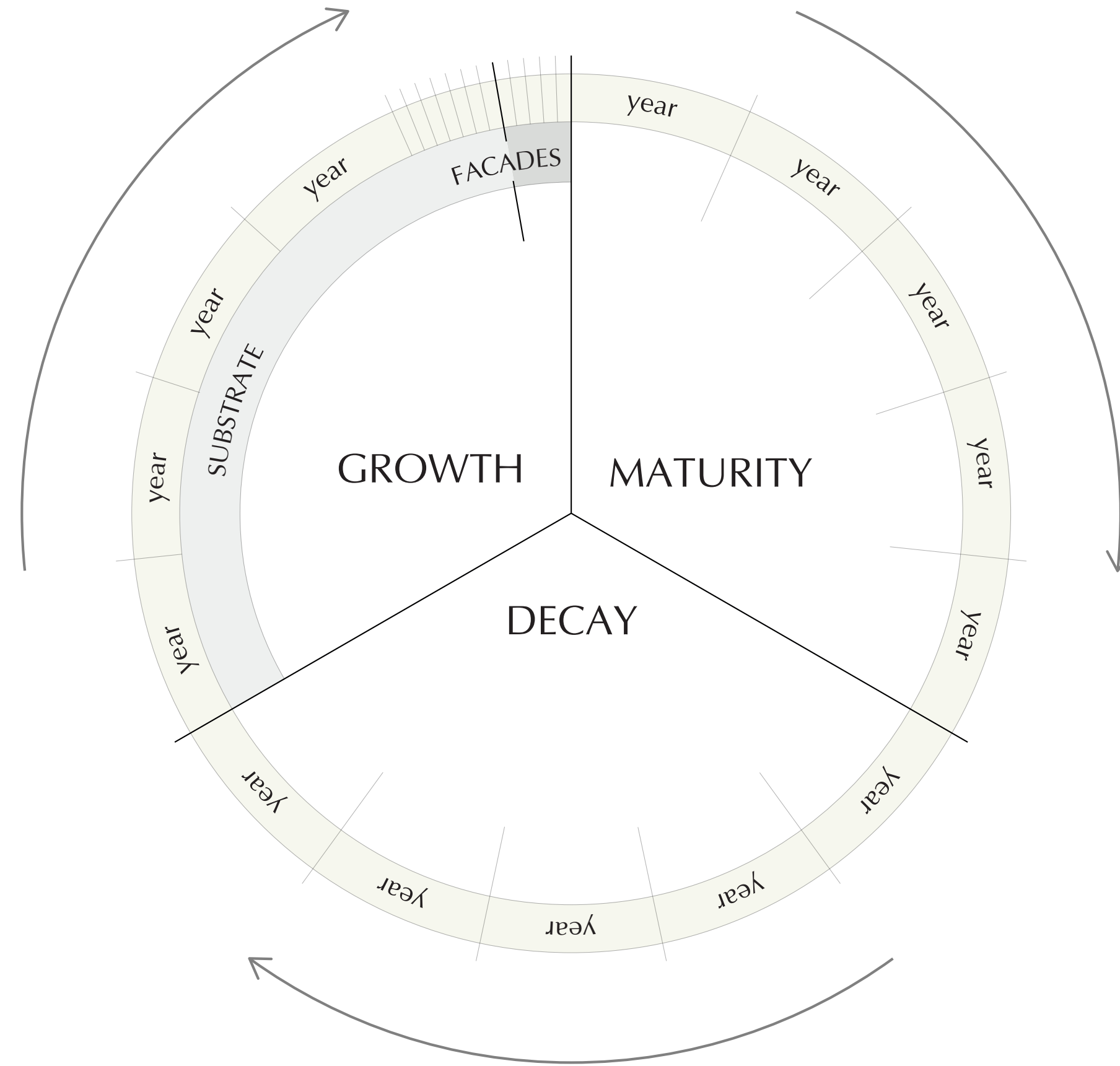
RESEARCH QUESTION

“How can mycelium’s cyclical nature find expression and practical application within architecture?”

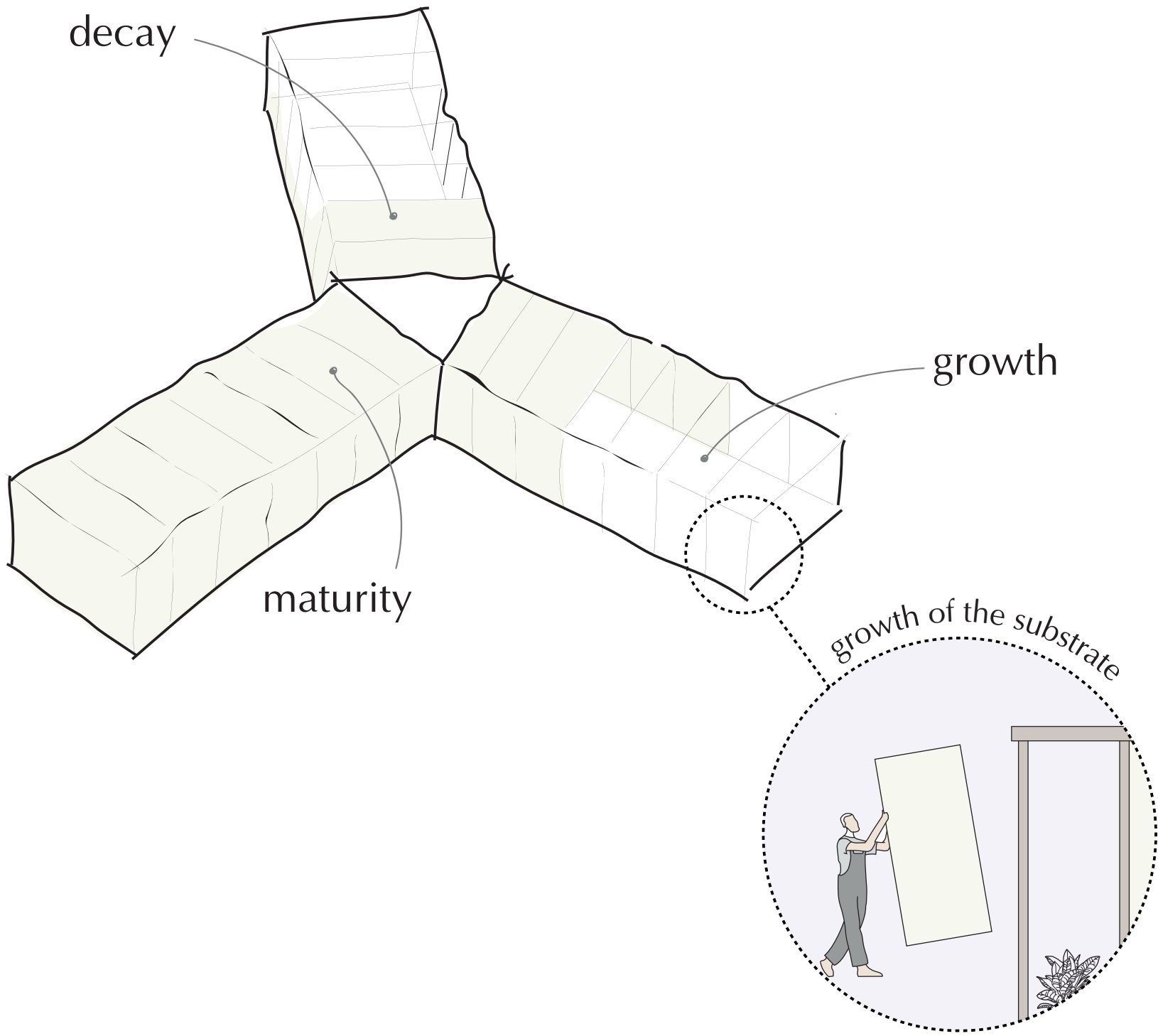
PHASES OF THE CYCLICAL PROCESS



DURATION OF THE CYCLE



A TRANSLATION TO ARCHITECTURE



**DESIGN
LOCATION**



THE HUNZE RIVER VALLEY



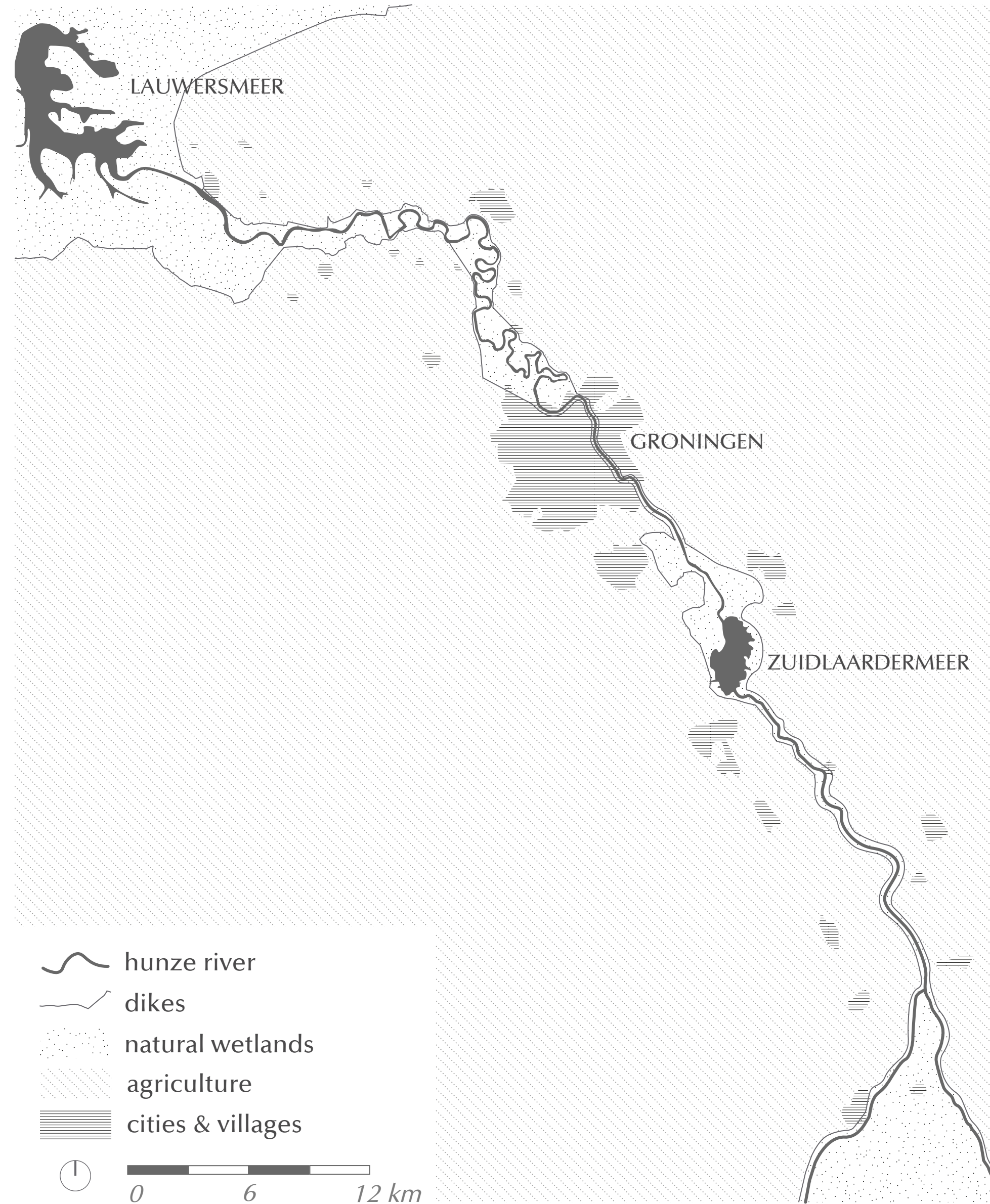
WETLANDS IN DRENTHE



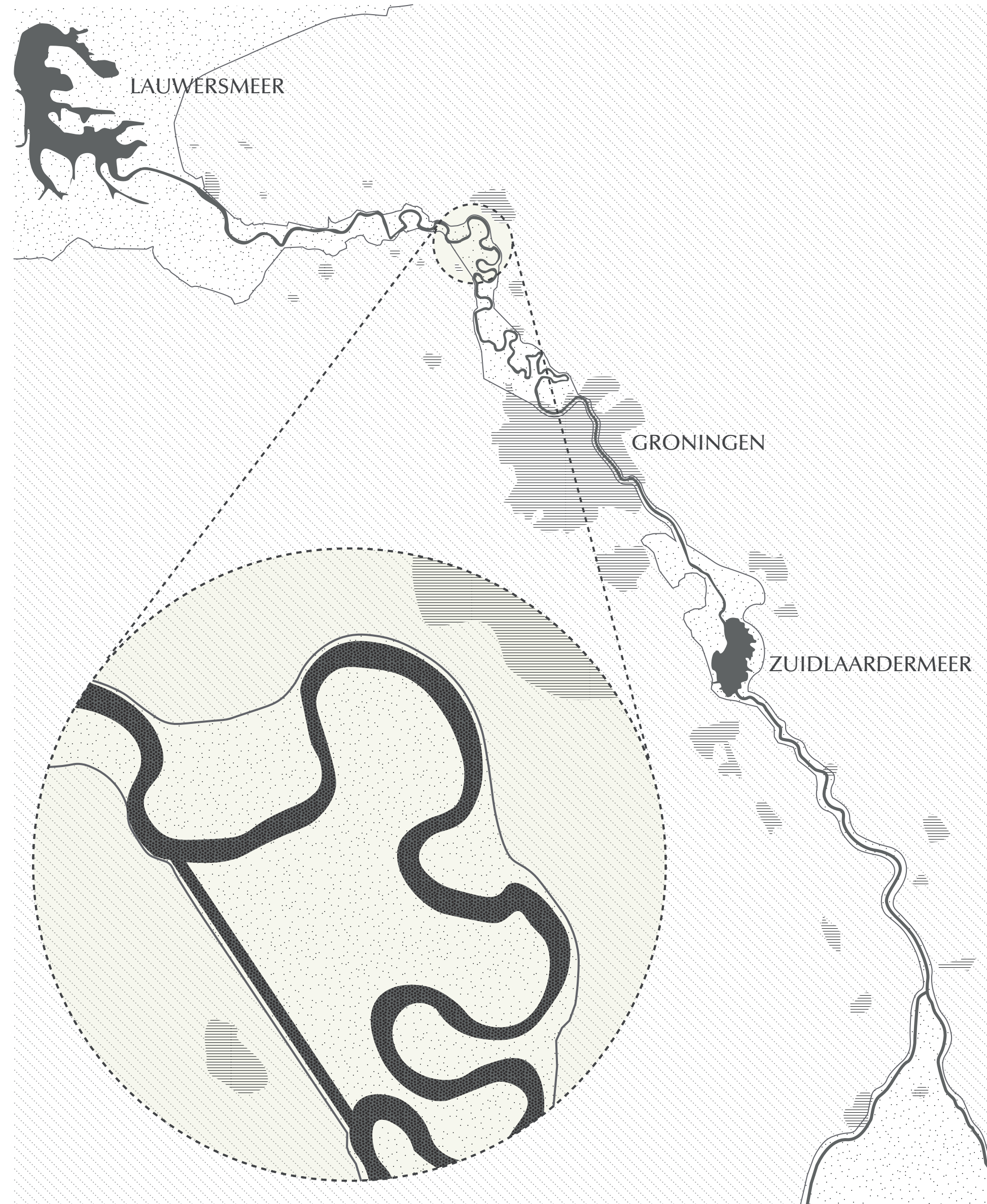
AGRICULTURAL LANDSCAPE IN GRONINGEN



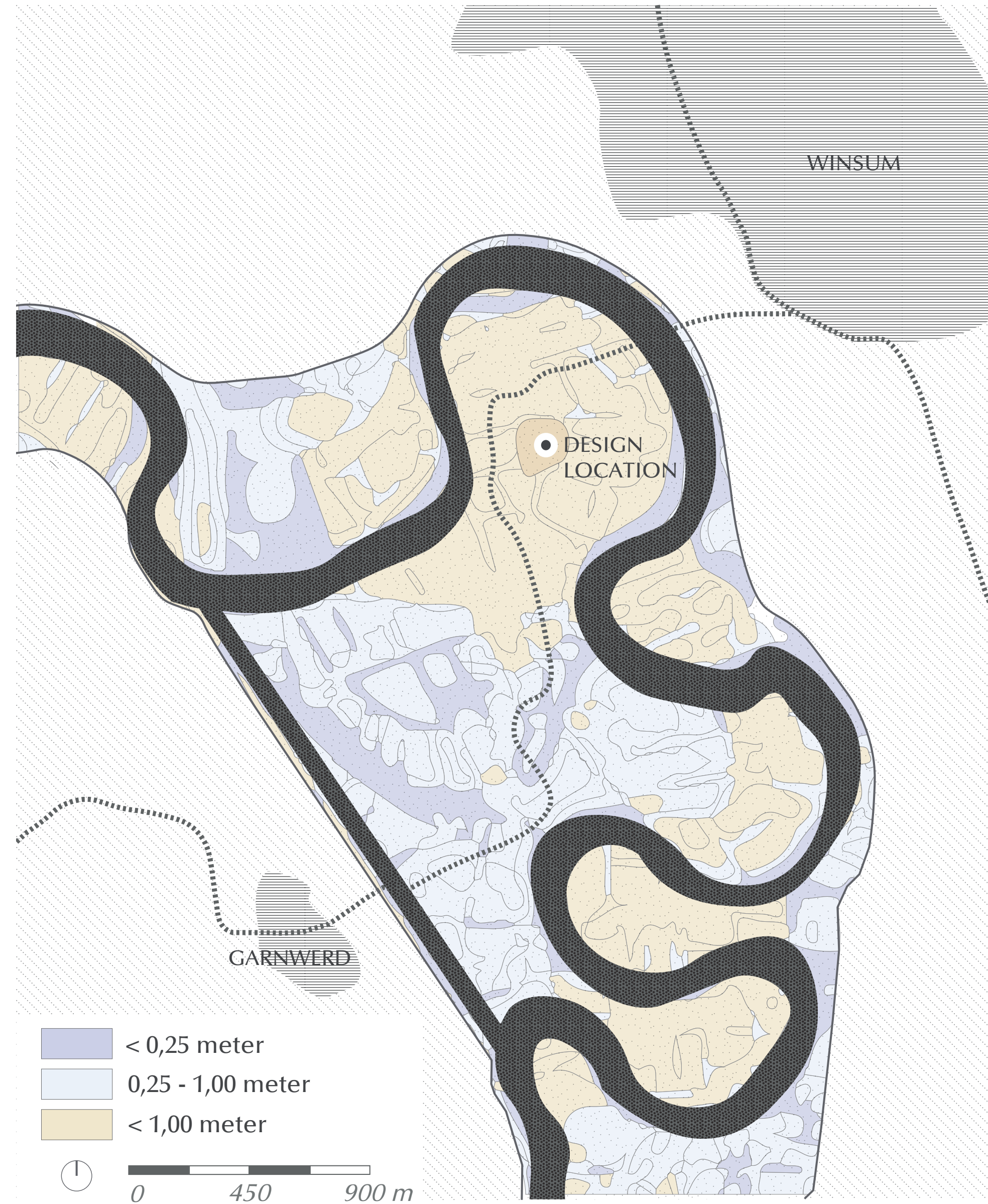
A FUTURE SCENARIO



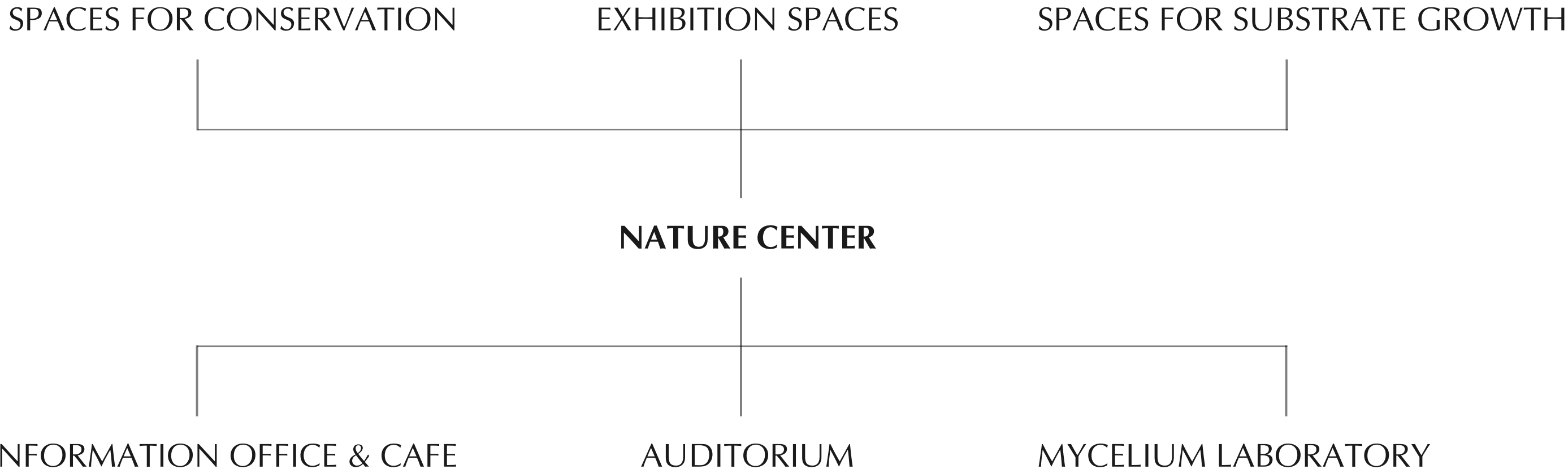
DEFINING THE LOCATION



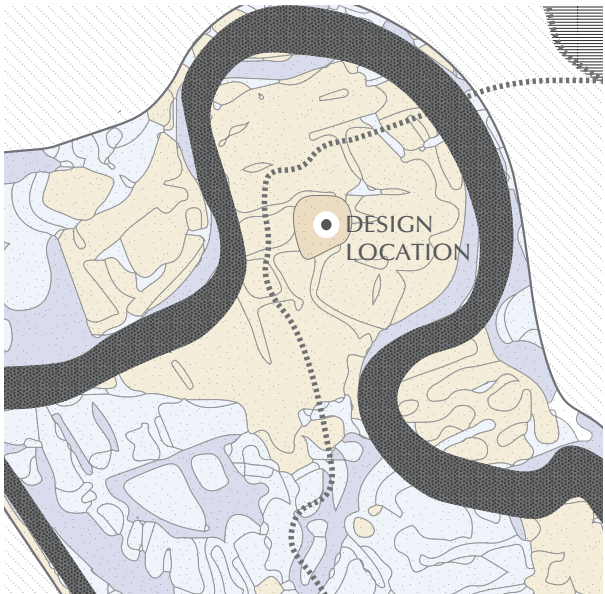
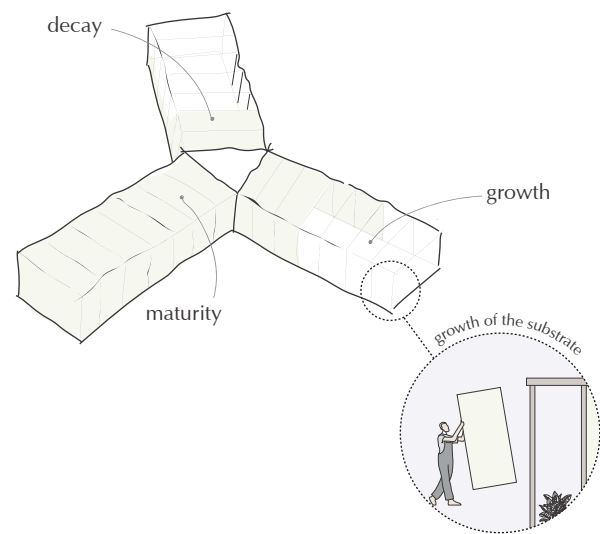
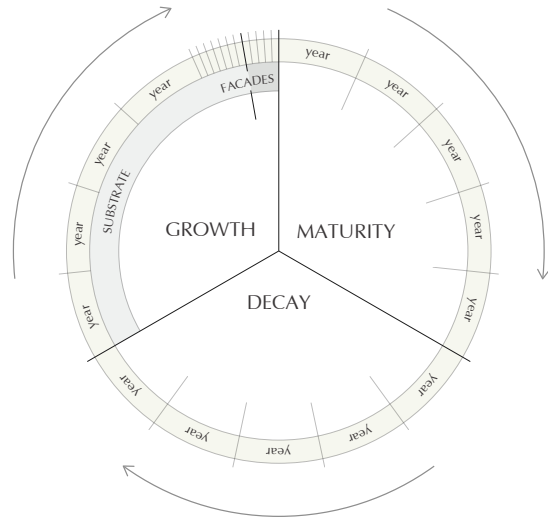
ZOOMING IN



PROGRAM



INITIATING THE DESIGN PHASE



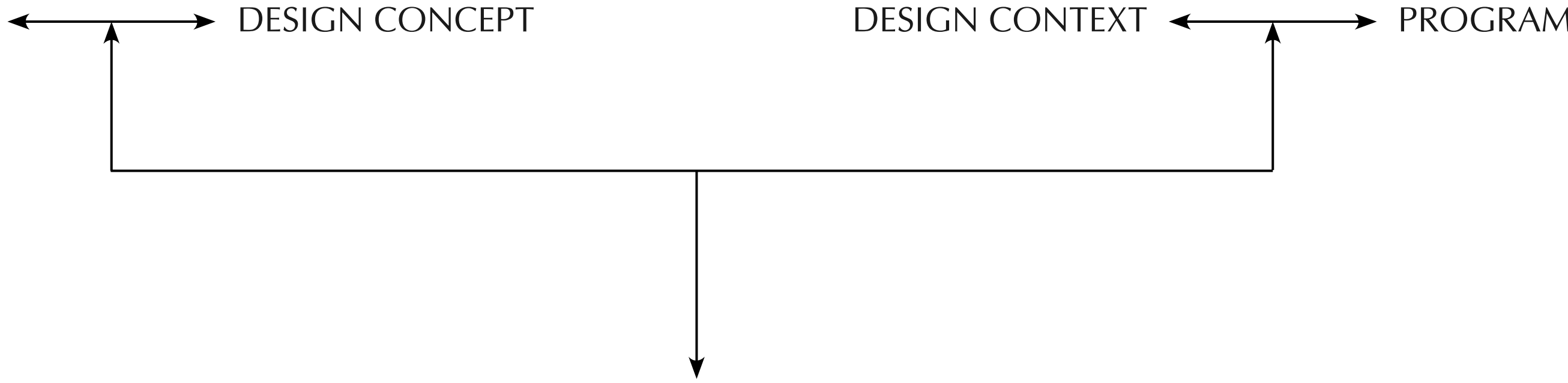
RESEARCH

DESIGN CONCEPT

DESIGN CONTEXT

PROGRAM

THE DESIGN



INTEGRATING STATIC BUILDING FUNCTIONS



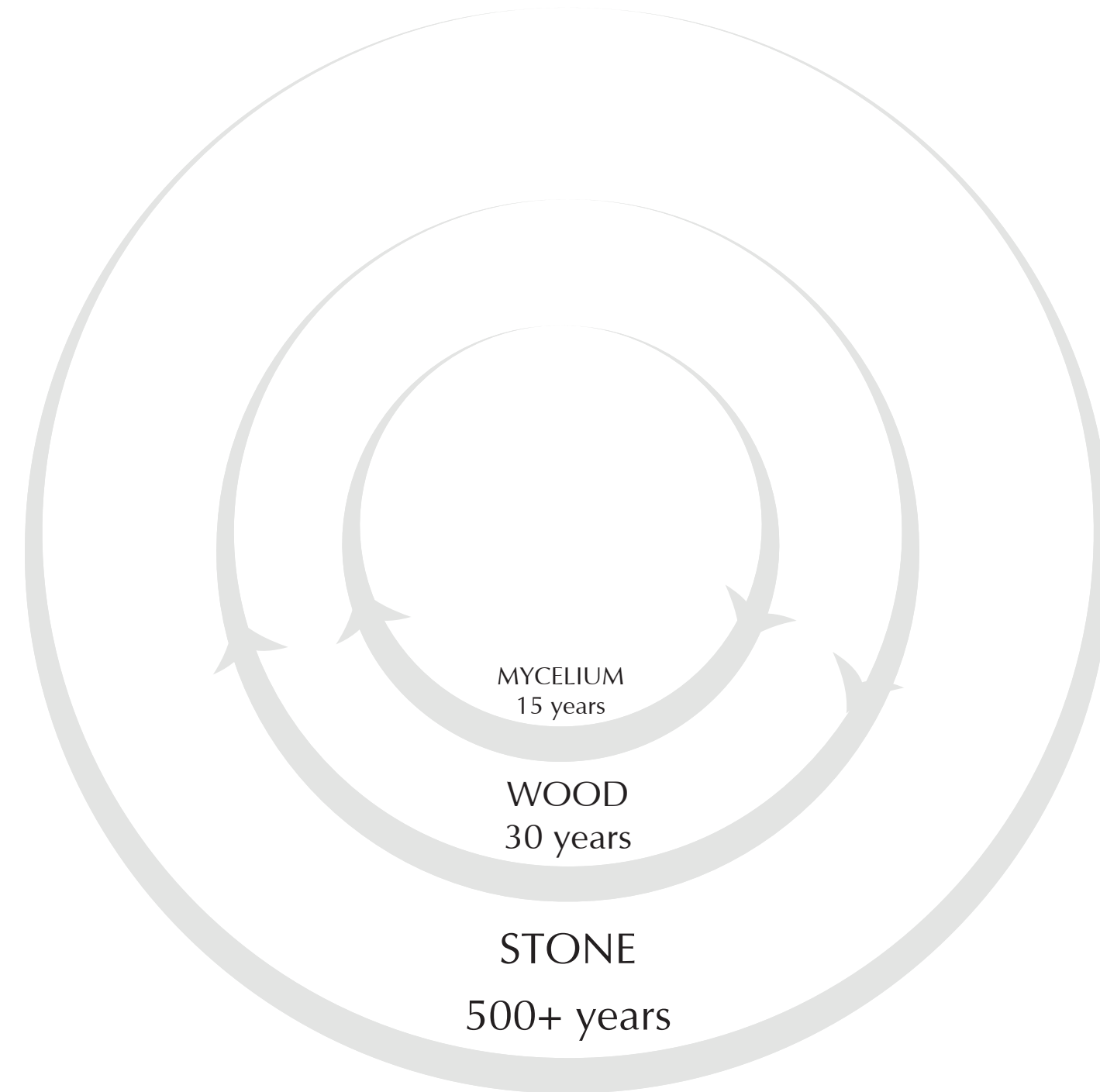
INTEGRATING STATIC BUILDING ELEMENTS



THREE MAIN MATERIALS



SYNCHRONIZING MATERIAL RHYTHMS



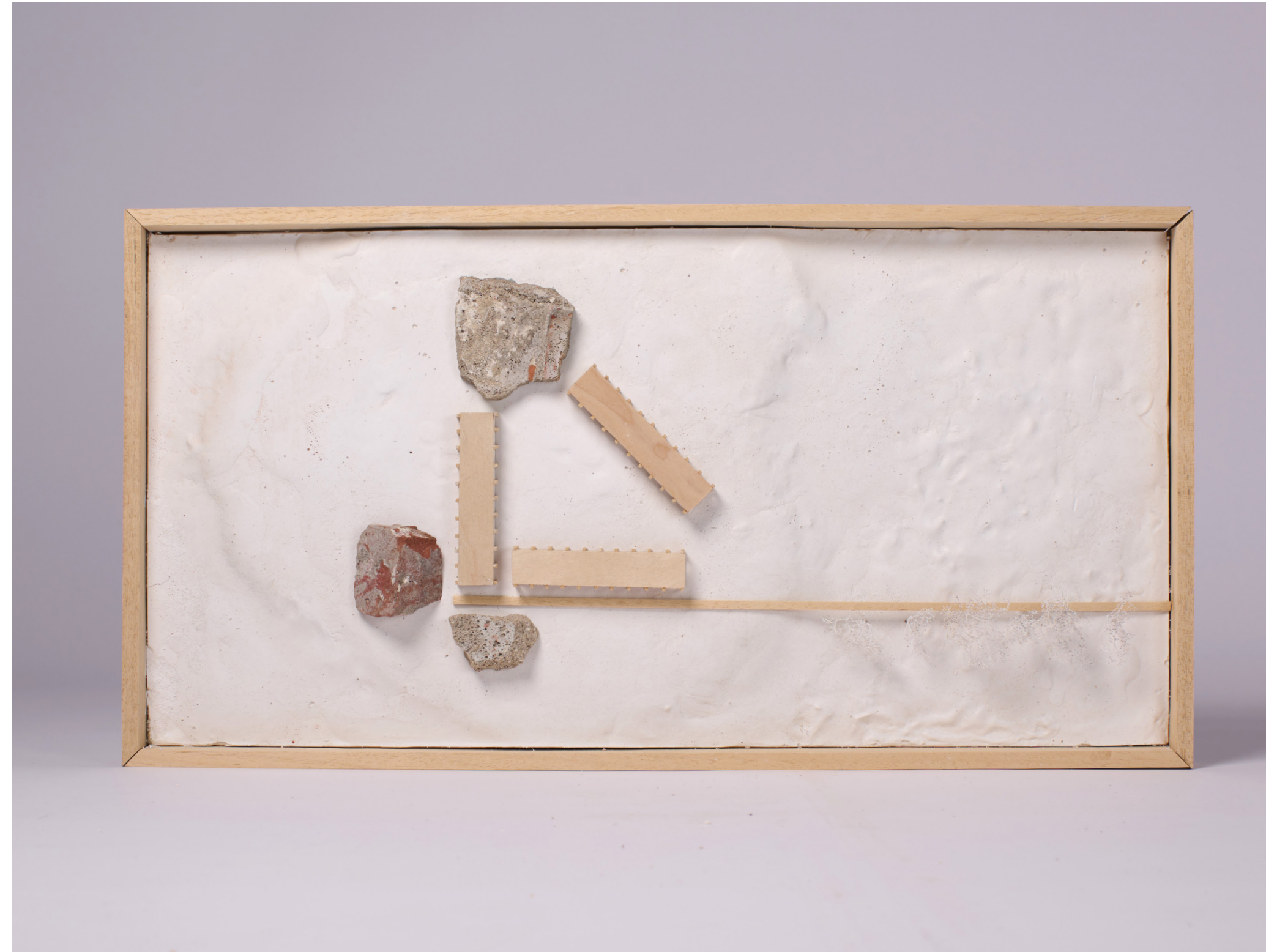
SHIFTING THE DESIGN QUESTION

“How can the durability of mycelium, stone and wood
be aligned with the intended lifespan of the building
elements and functions?”

&

“How can this durability be architecturally expressed”

SPATIAL ORGANISATION



**APPROACHING THE
NATURE CENTER**



GALLERY OF GROWTH



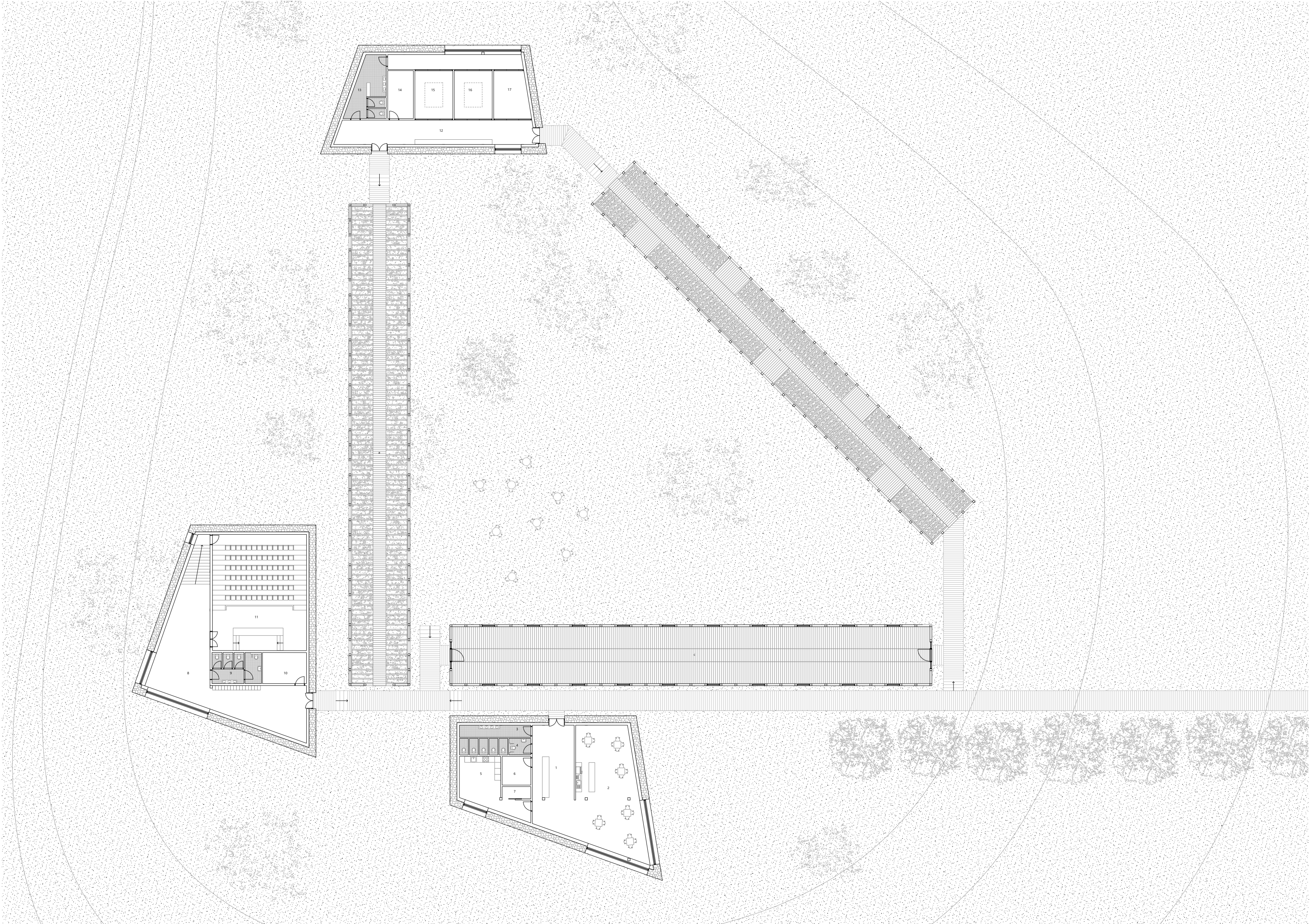


GALLERY OF MATURITY

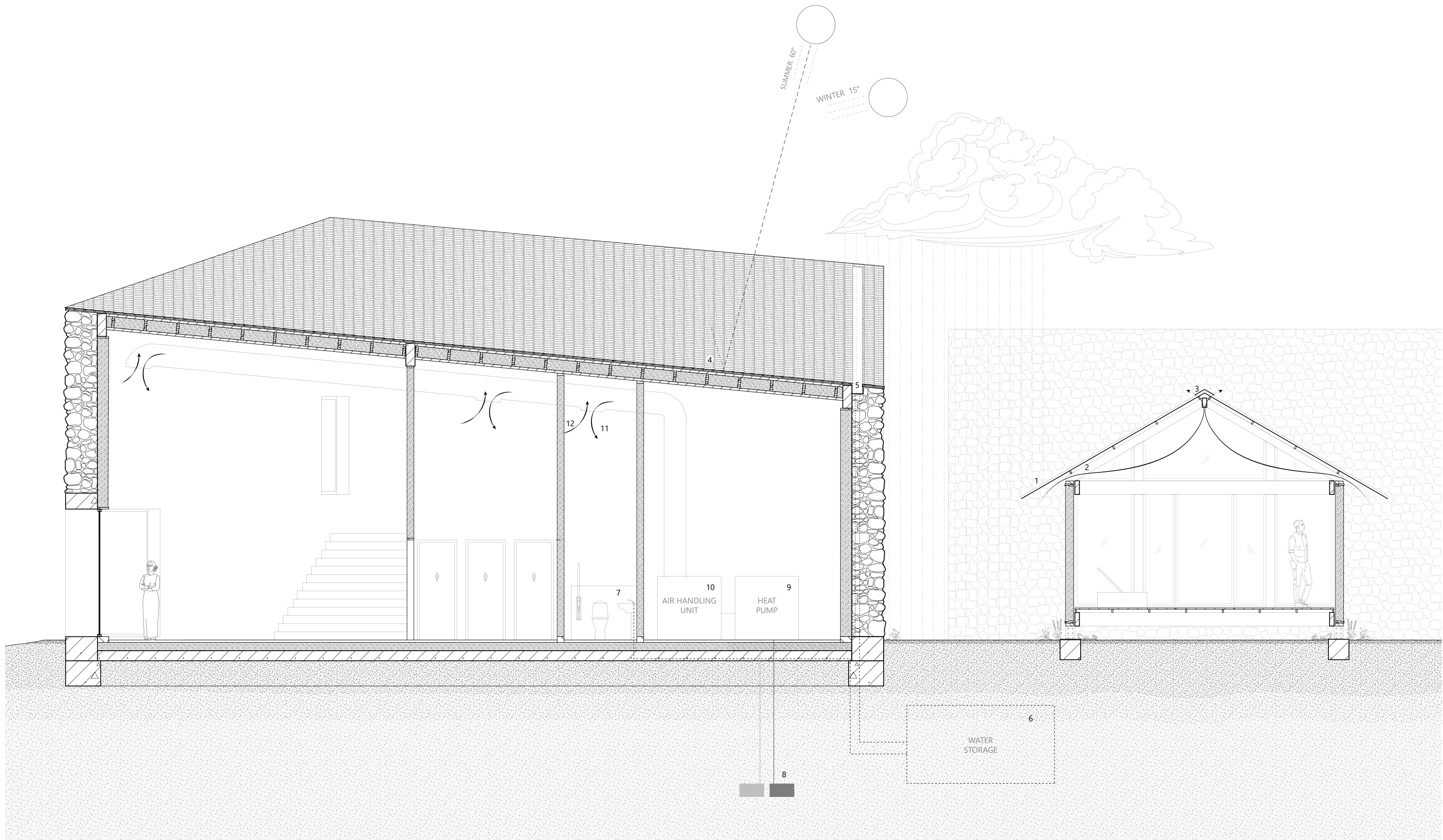




FLOORPLAN



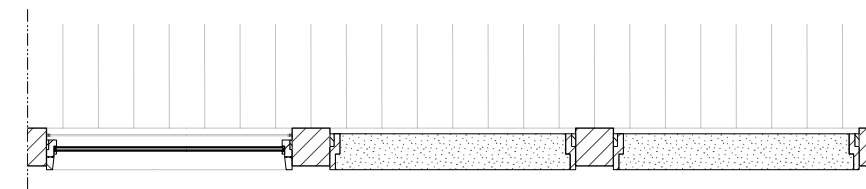
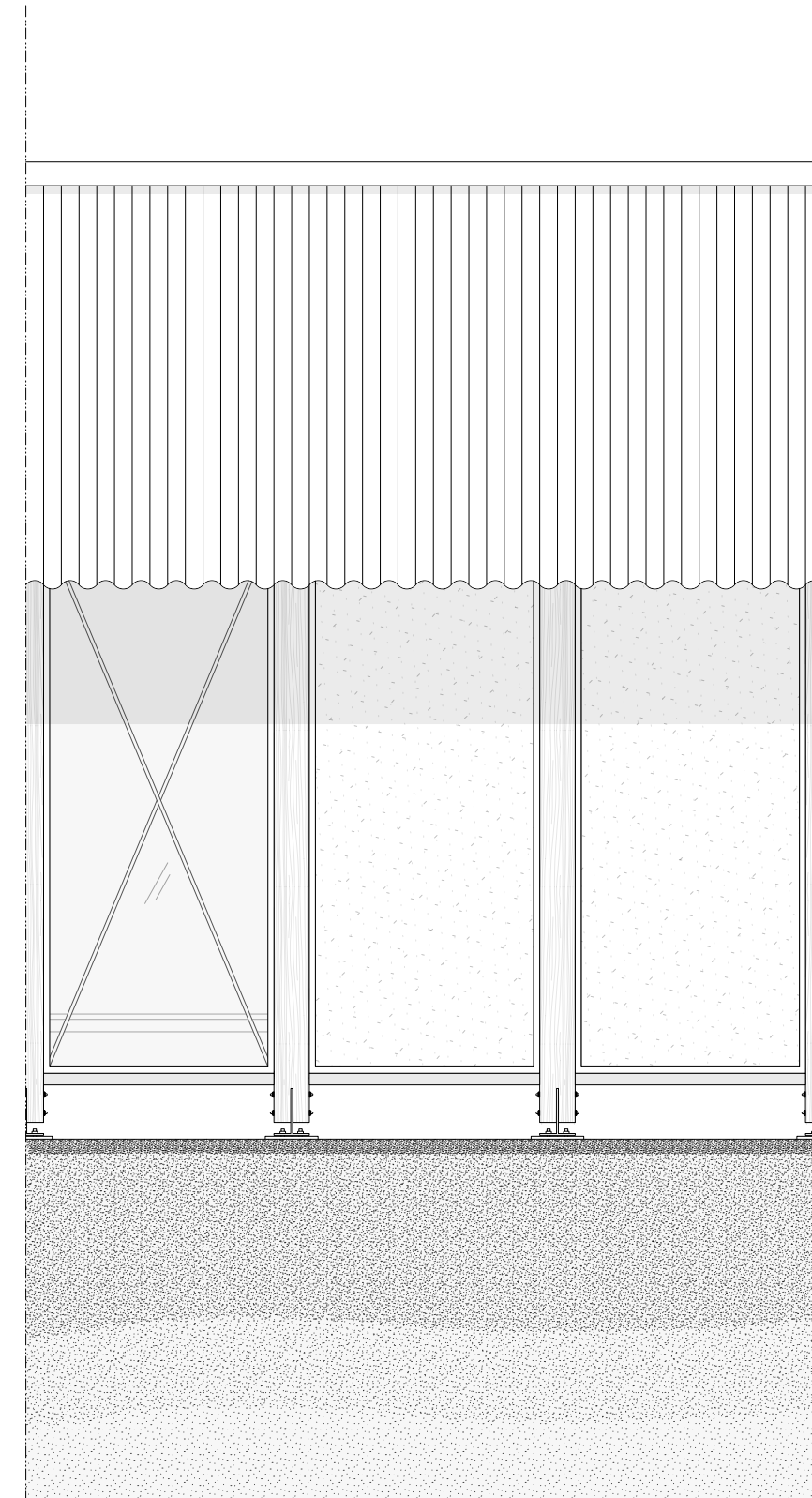
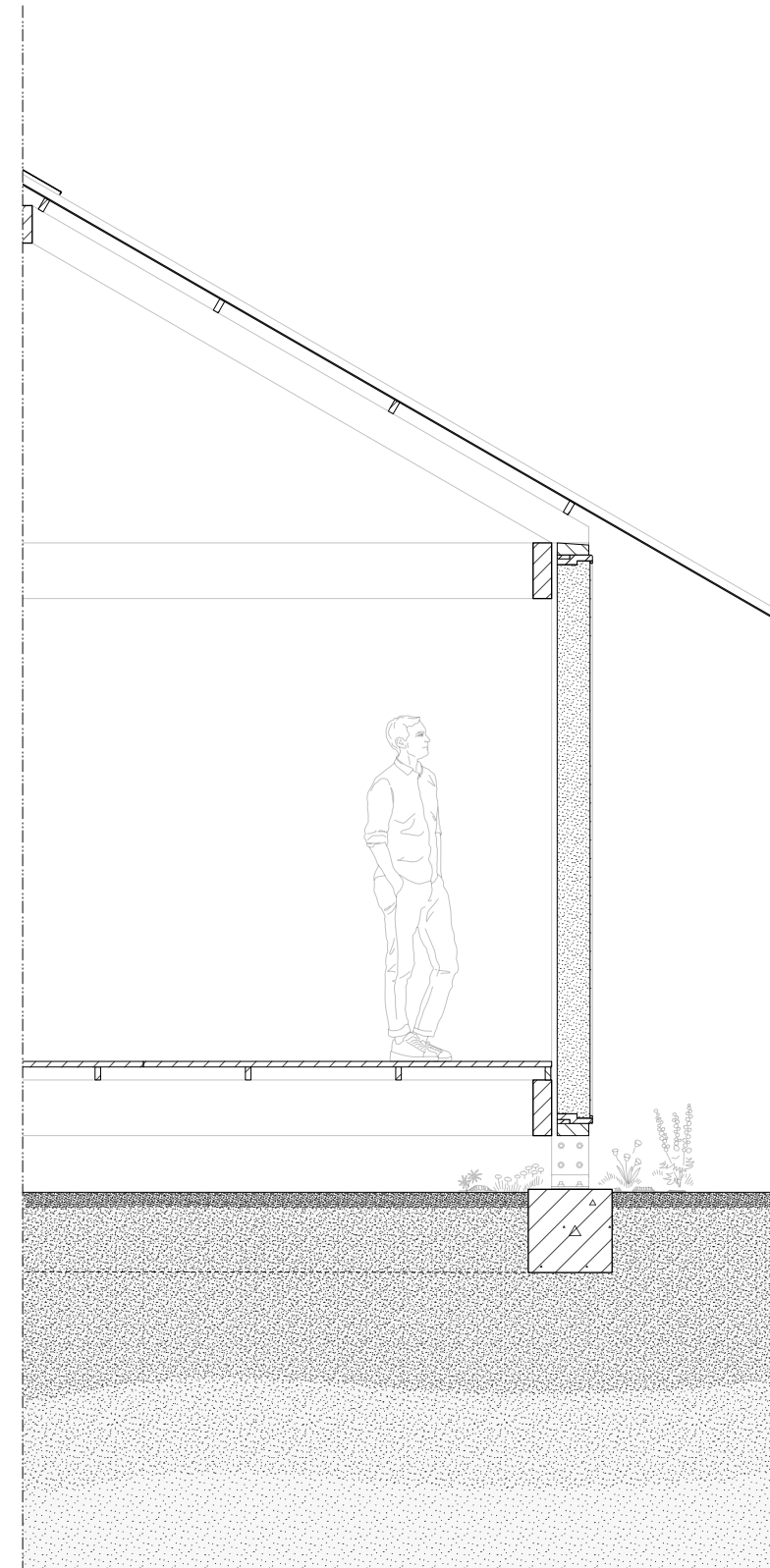
SECTION



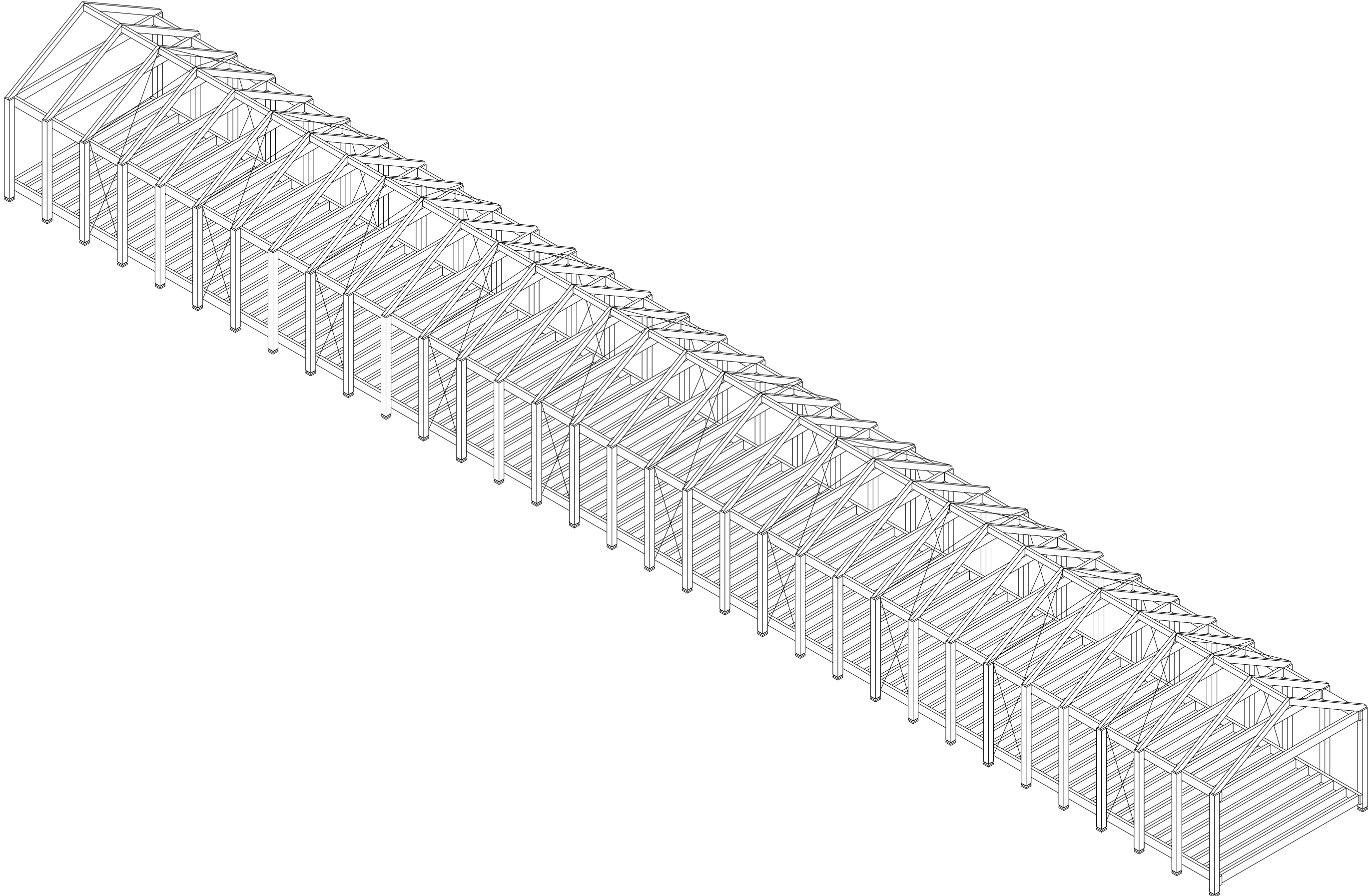
DYNAMIC FACADES



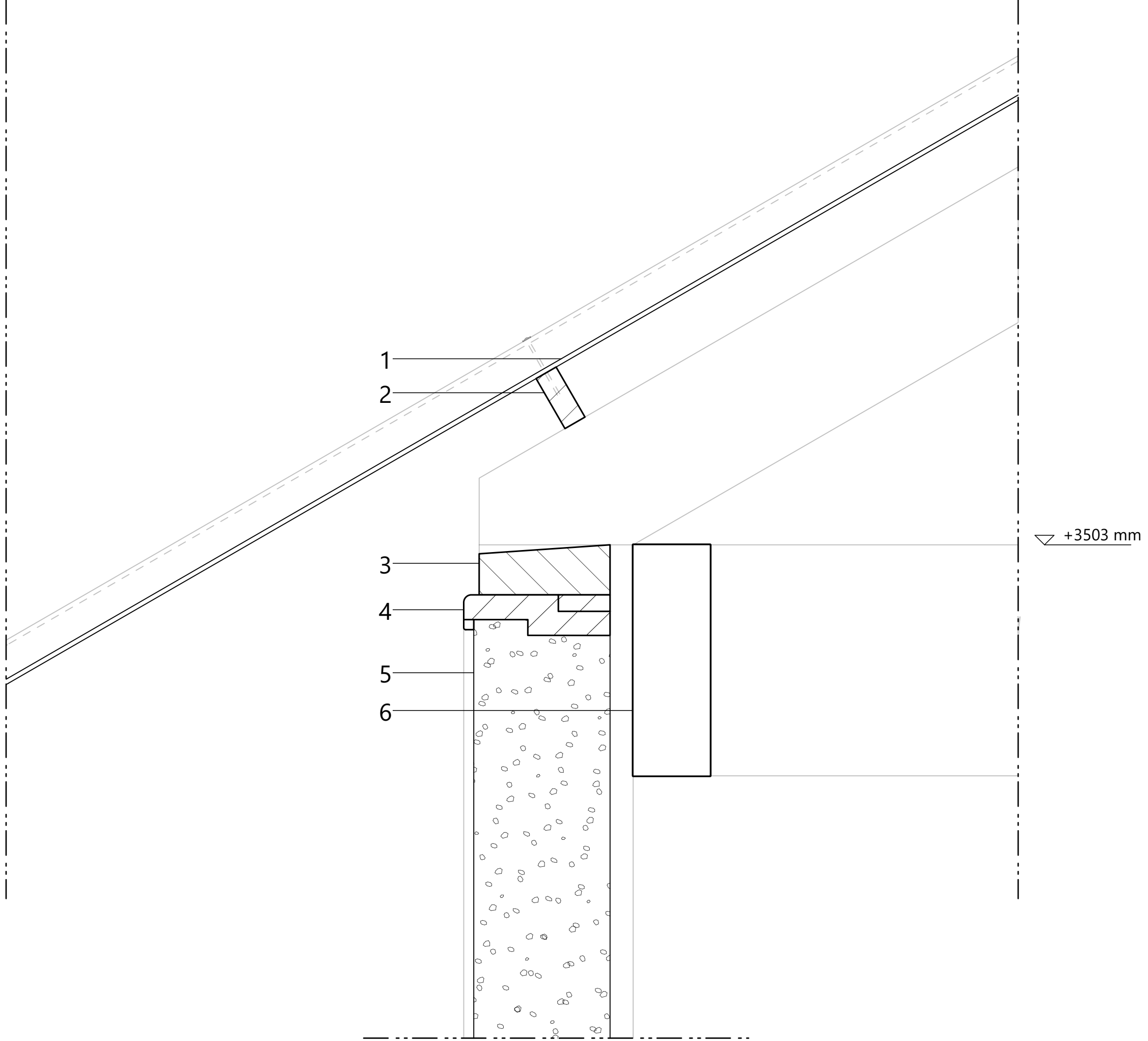
FACADE FRAGMENT



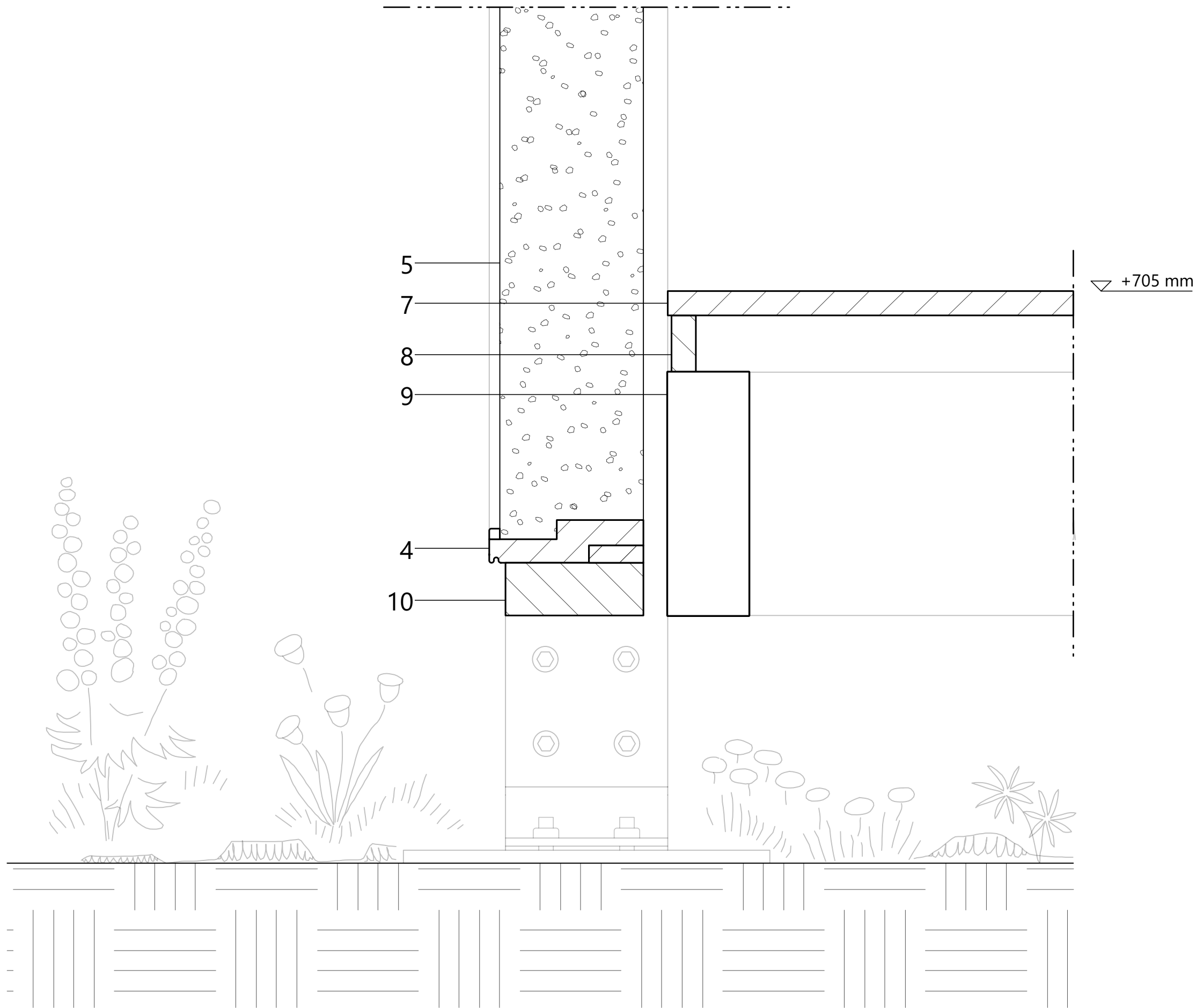
DYNAMIC STRUCTURES



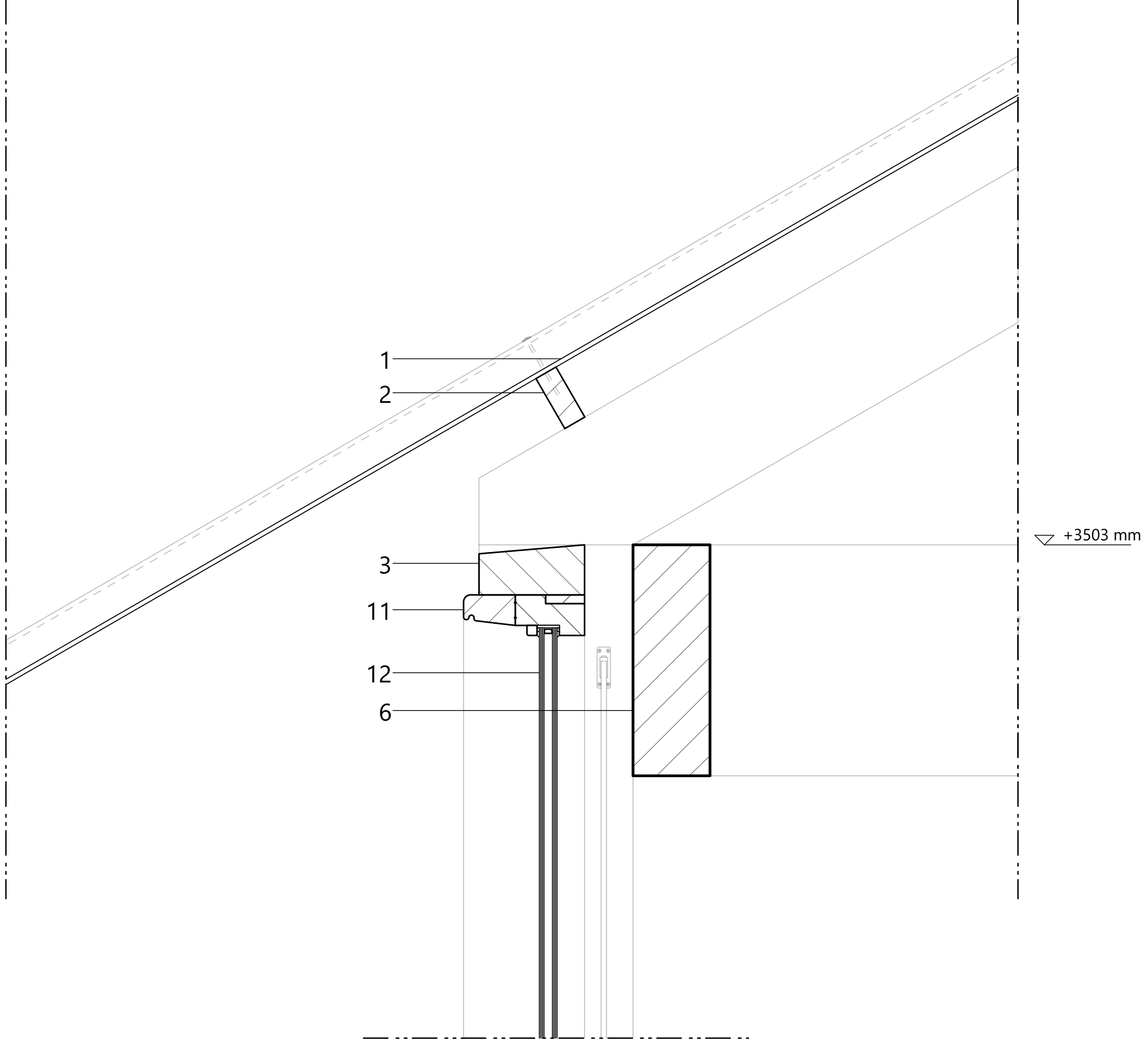
ROOF DETAIL
MYCELIUM PANELS



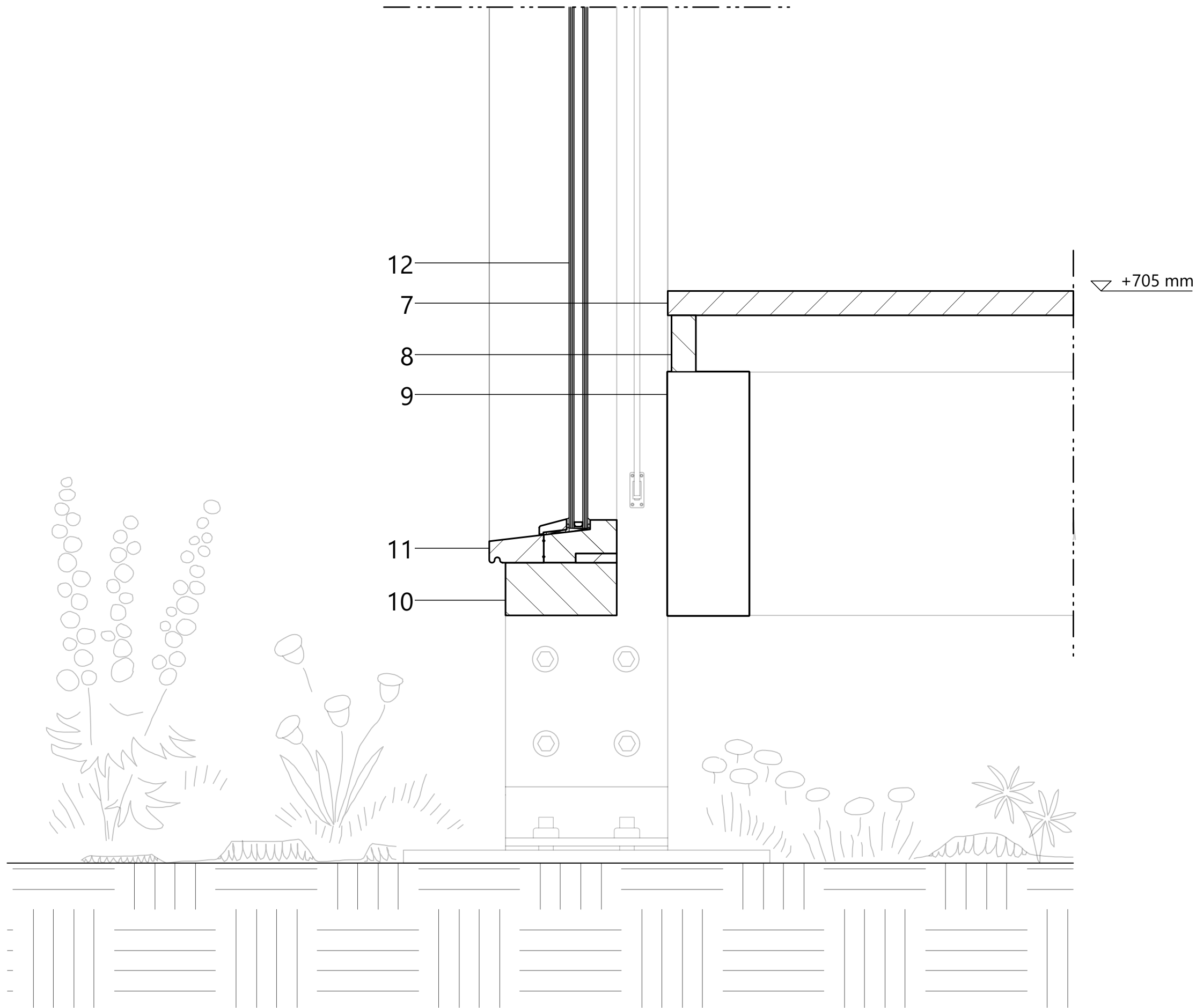
FLOOR DETAIL MYCELIUM PANELS



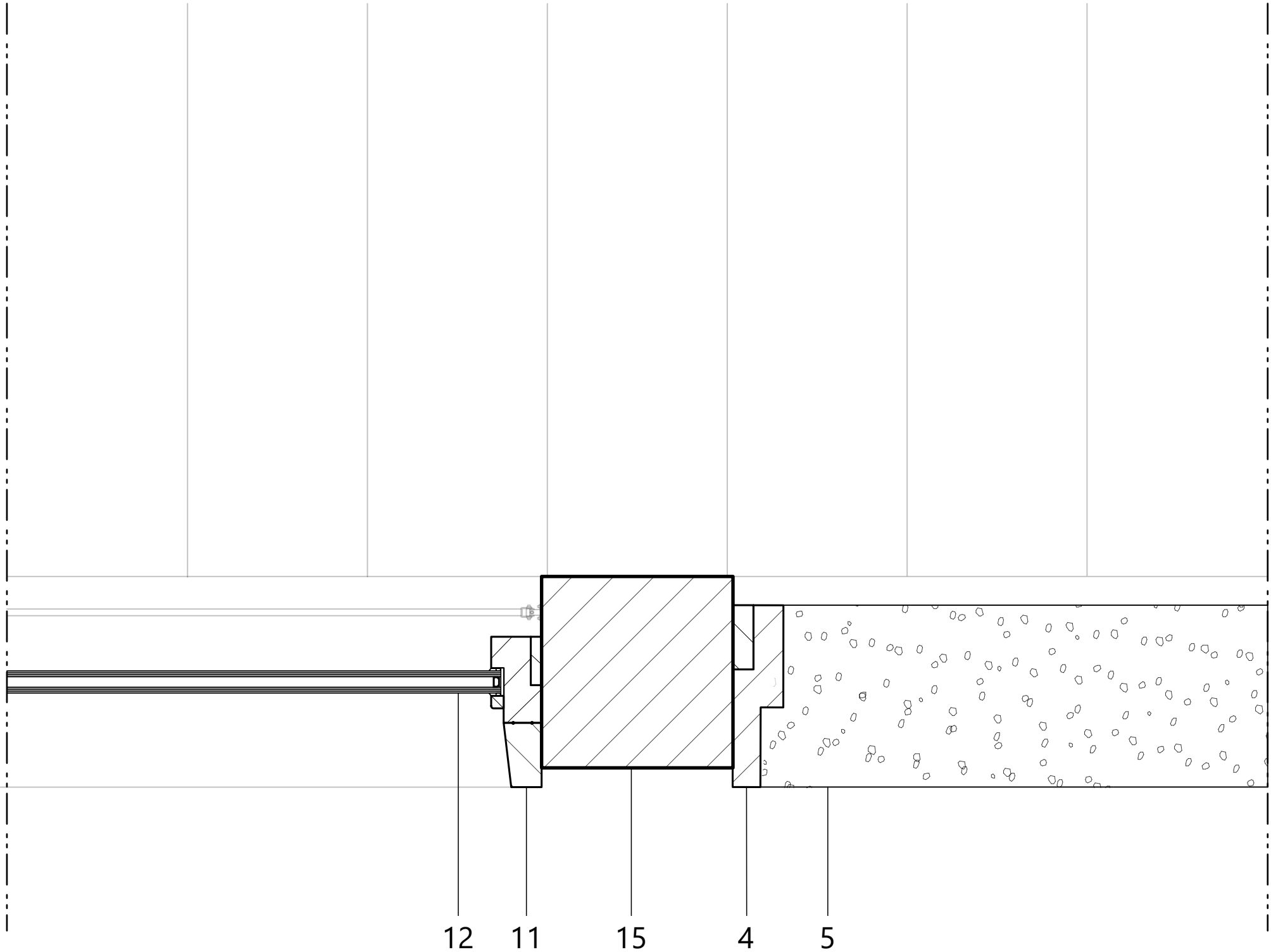
ROOF DETAIL WINDOWS



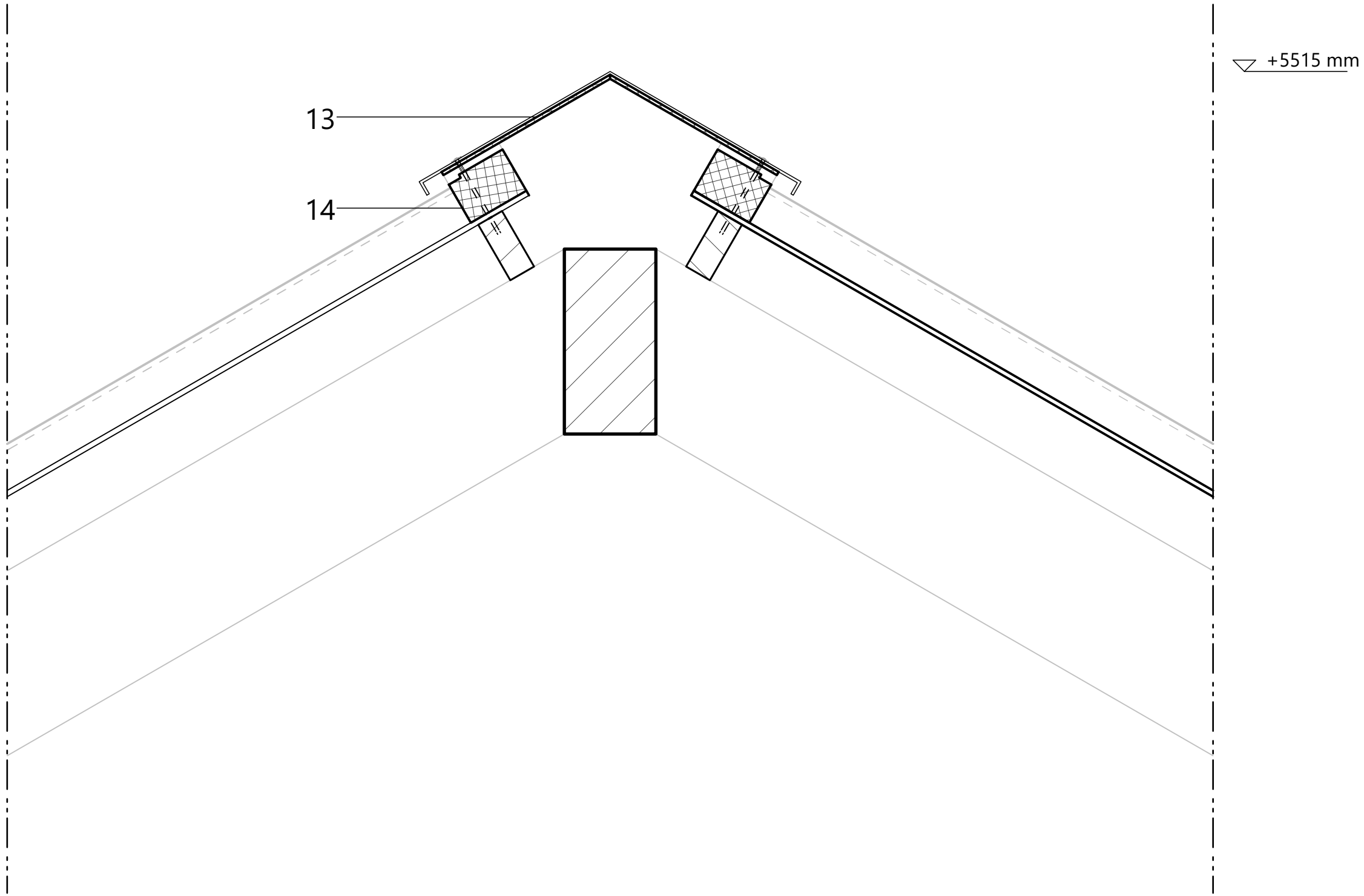
FLOOR DETAIL WINDOWS



RIDGE DETAIL



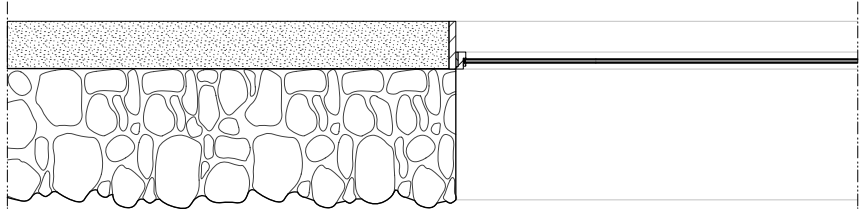
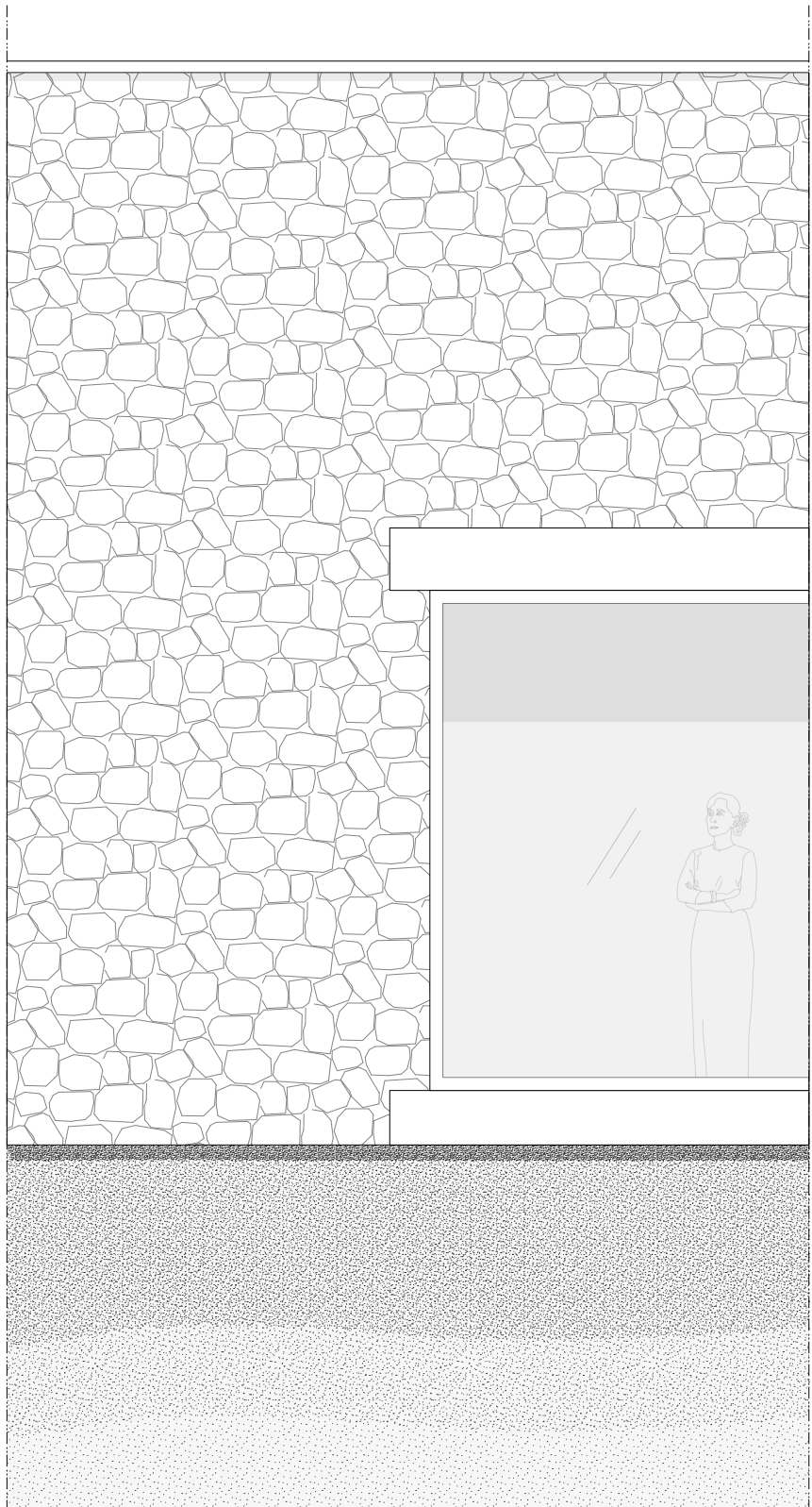
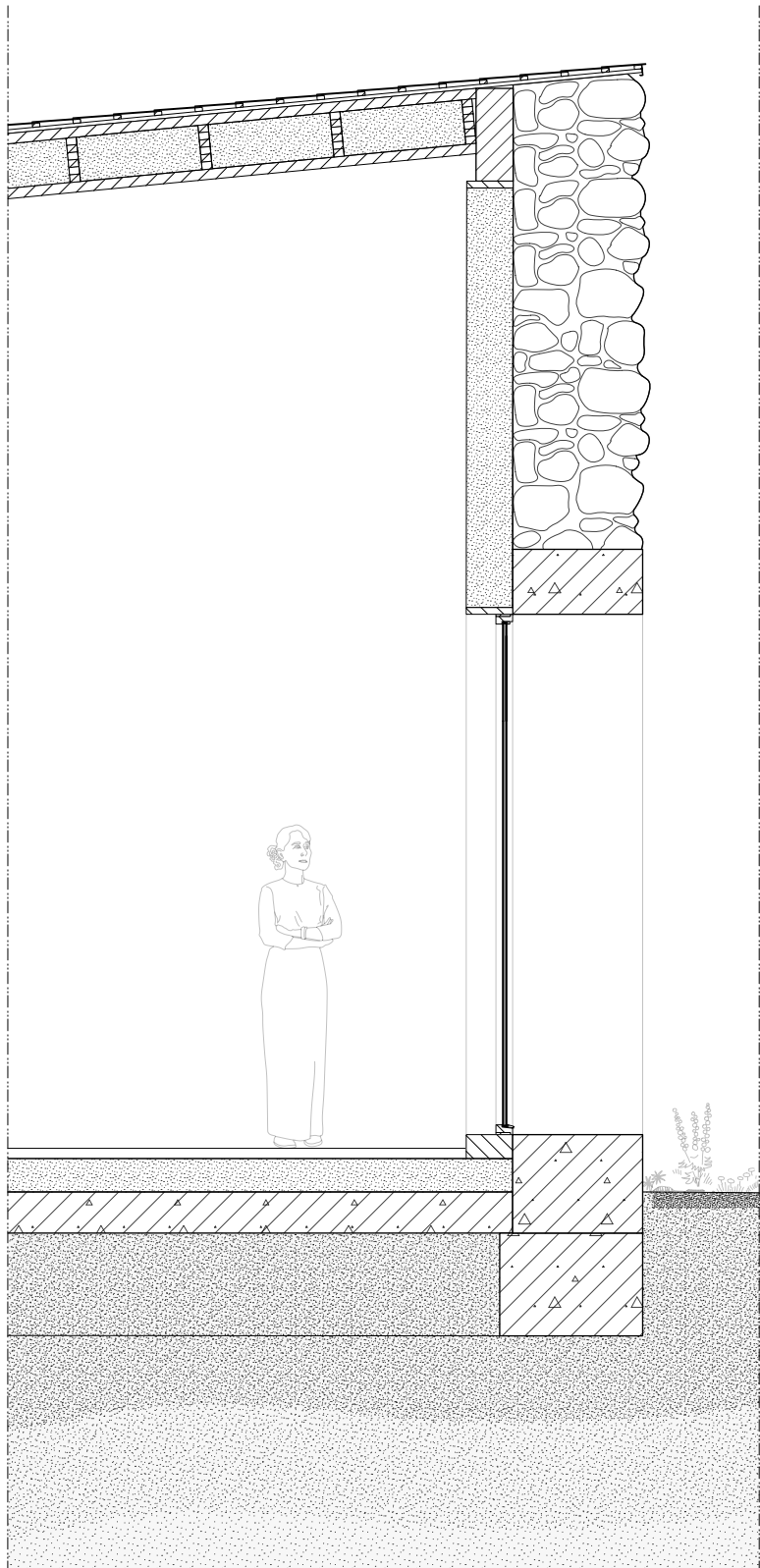
RIDGE DETAIL



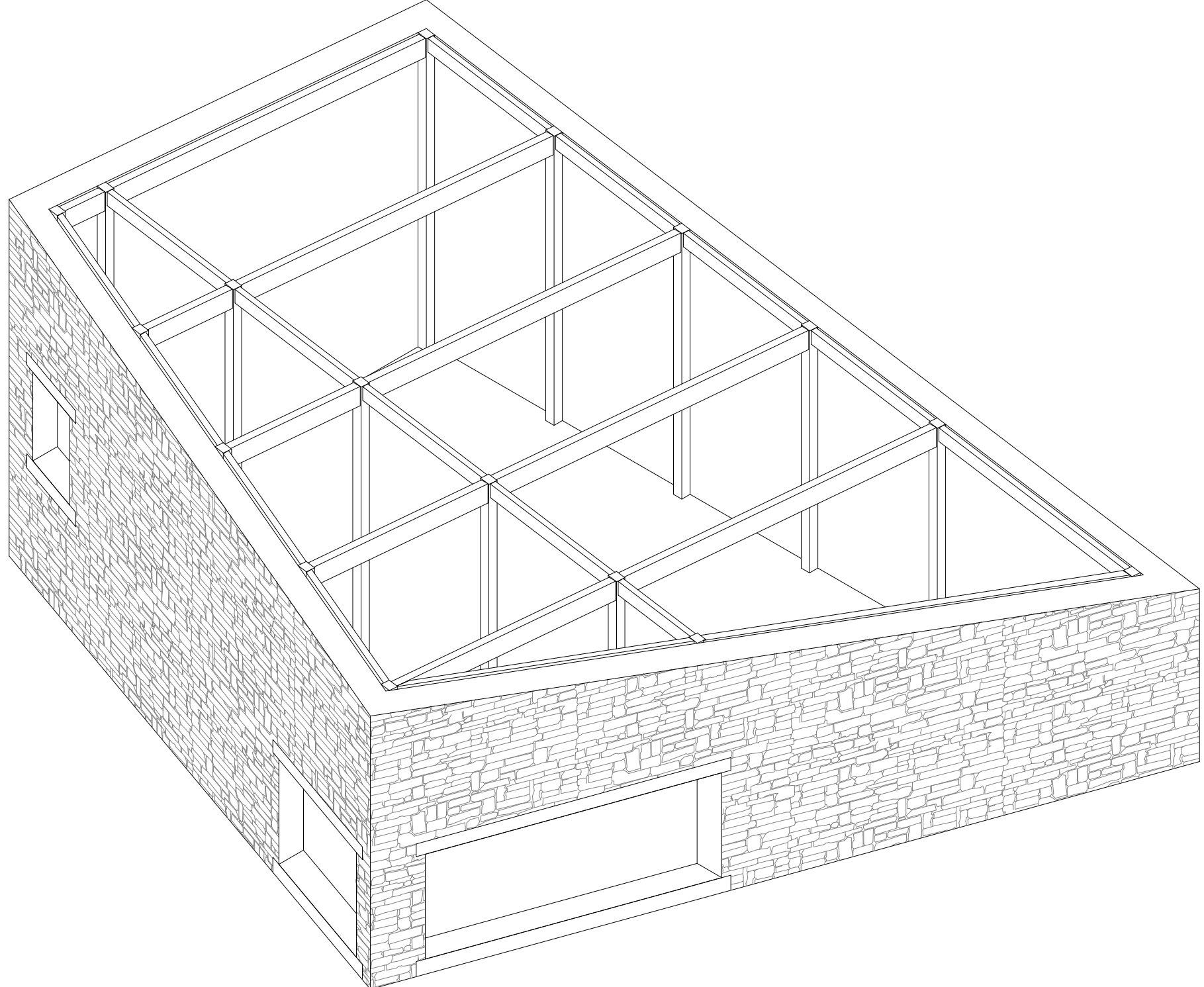
STATIC FACADES



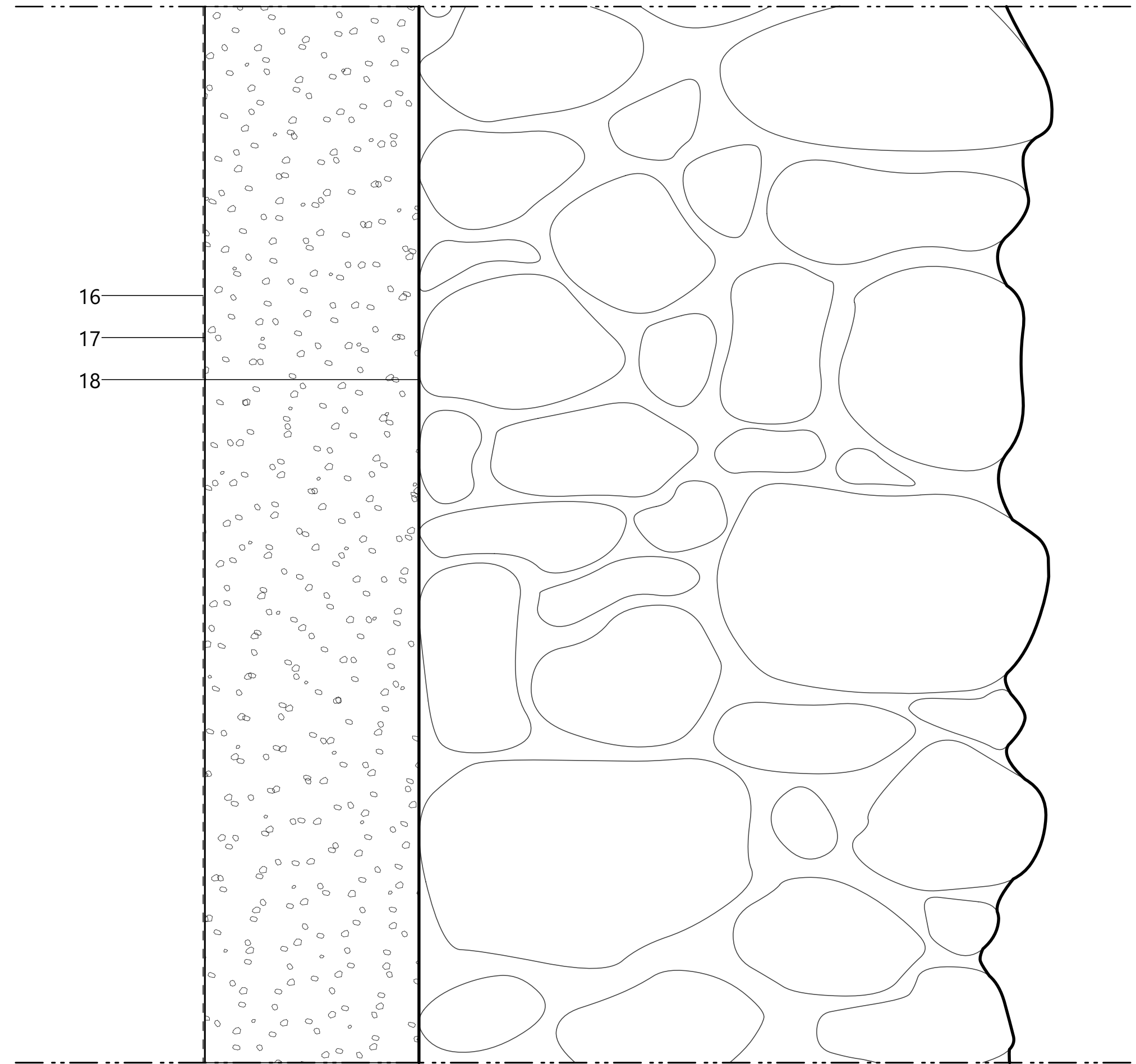
FACADE FRAGMENT



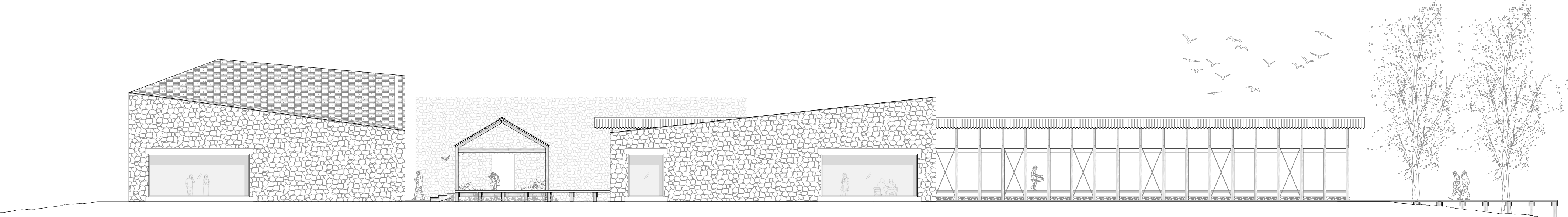
STATIC STRUCTURES



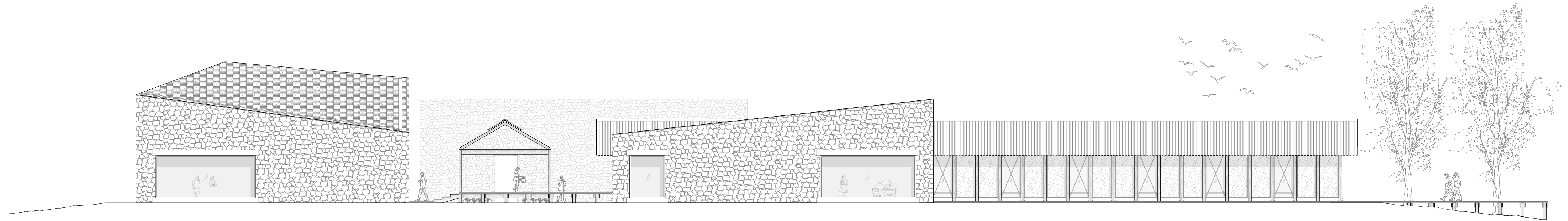
FACADE DETAIL



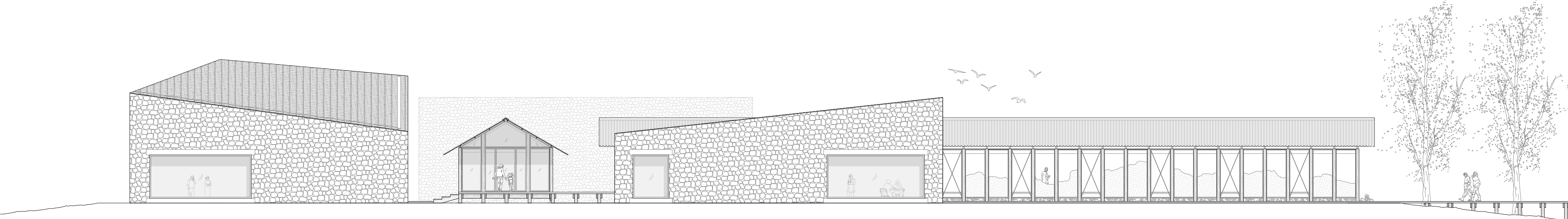
ELEVATION



ELEVATION



ELEVATION





LIFECYCLE & PRODUCTION

